

MEMORIAL REGIONAL HOSPITAL SURGICAL AND CRITICAL CARE TOWER EXPANSION TRAFFIC IMPACT STUDY

March 2025

Revised April 2025

Prepared for:



Prepared By:



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A SAFEbuilt COMPANY



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PROFESSIONAL ENGINEER CERTIFICATE

I hereby certify that I am a registered professional engineer in the State of Florida practicing with Calvin, Giordano & Associates, Inc., a corporation authorized to operate as an engineering business, EB 00006500, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluation, findings, opinions, conclusions, or technical advice hereby for:

PROJECT: Memorial Regional Hospital Surgical and Critical Care Tower Expansion —
Traffic Impact Study

LOCATION: Hollywood, Florida

I acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

This item has been digitally signed and sealed by Pablo Chon Kan, PE on the date indicated here. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.

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EXECUTIVE SUMMARY

Calvin, Giordano, and Associates Inc. (CGA) was appointed by Memorial Healthcare System (MHS) to conduct a traffic impact study for the Memorial Regional Hospital's (MRH) Surgical & Critical Care Tower Expansion in the City of Hollywood, Florida, which is anticipated to be completed in 2030. This study aimed to evaluate the current and projected traffic conditions and offer recommendations to mitigate potential impacts.

The CGA team focused on several intersections and roadway segments surrounding the project. The following intersections were included in the analysis:

- Johnson Street and N 35th Avenue (Signalized Intersection)
- Johnson Street and N Park Road (Signalized Intersection)
- N 35th Avenue and Hospital Drive (Memorial Medical Office Centre Driveway) (Signalized Intersection)
- Garfield Street and N 35th Avenue (Roundabout)
- Garfield Street and N Park Road (Two-way Stop Controlled Intersection)
- Johnson Street and Emergency Entry Access (Two-way Stop Controlled Intersection)
- Johnson Street and N 38th Avenue (Employee Parking Access) (Two-way Stop Controlled Intersection)
- Johnson Street and N 46th Avenue (Signalized Intersection)

CGA team also conducted a segment analysis consisting of the following segments:

- N 35th Avenue – North of Garfield Street
- N 35th Avenue – Between Garfield Street & Memorial Medical Office Centre Driveway
- N 35th Avenue – Between Memorial Medical Office Centre Driveway and Johnson Street
- Johnson Street - Between N 35th Avenue and Hospital Employee Parking Garage





The assessment covered existing conditions, future scenario without the project, and future scenario with the project conditions following the Surgical and Critical Care Tower expansion. The data collection effort included 24-hour turning movement counts, signal timing, and phasing plans. The methodology for the study was developed in collaboration with the City of Hollywood. Intersection geometry, pavement markings, signage, storage lengths, and lane assignments were reviewed and corroborated during field visits. The traffic data was adjusted for Peak Season traffic growth using annual trends and collected traffic data for the future scenario.

The expansion of MRH is projected to generate an additional 2,258 daily trips and 172 trips and 180 trips during the AM peak and PM peak hours, respectively. The trips generated were assigned to the network in the future total traffic conditions, anticipating the Surgical and Critical Care Tower expansion completion. Synchro 11 software was used to evaluate the intersection capacity and delays for the above-mentioned intersections for existing, future build without project, and future total traffic with project.

The analysis shows a deficient Level of Service (LOS) at the northbound approach of the intersection of N 46th Avenue and Johnson Street. To help mitigate the deficient operation at the northbound approach of N 46th Avenue and Johnson Street intersection, an intersection optimization was performed. It is noted that the intersection operates at a LOS D or better.

In addition, the City has requested additional improvements that should be explored. The feasibility of implementing such improvements has not been determined since geometrical constraints may limit the Right-of-Way availability.

- Intersection Improvements at Johnson St and N 46th Ave: Extend the westbound left turn lane length to 200 feet total and add a right turn lane expanding to the median. Right-of-way availability needs to be studied for the implementation of such improvements.
- Intersection Improvements at Johnson St and N 35th Ave: Add a westbound continuous right turn lane from the N 35th Avenue and Johnson St intersection to





the Emergency Entrance. Right-of-way availability needs to be studied for the implementation of such improvement.

- Intersection Improvements at Johnson St and Employee Garage: Increase the number of traffic officers from 1 to 2 officers. This should allow the left turn movements during peak periods.
- Intersection Improvements at Johnson St and N Park Rd: Restripe to extend the eastbound left turn lane length and remove the two-way left turn lane shared left turn lane.

Additional measures were explored to improve the network operation. For the intersection of N 35th Avenue and Johnson Street, the implementation of a one westbound left-turn lane, one westbound through lane, and one westbound shared through/right-turn lane and the optimization of the signal timing. This modification appears to improve the operation of the intersection, except for the southbound approach which sees a significant increase in the delays for the PM Peak Period. Furthermore, this configuration requires the construction of two receiving lanes at the western approach of the intersection which is limited by the median and the existing left turn lane to access the Children's Emergency Entrance.

The implementation of a traffic signal at the Employee Garage driveway was analyzed using a 70/30 and a 50/50 distribution for the exiting right- and left turning vehicles for the PM Peak Period. This change generated minor improvements at the intersection of N 46th Avenue and Johnson Street. Furthermore, the rest of the intersections saw increased delays and queues.

The report provides an evaluation of the expected traffic impacts from the MRH Surgical & Critical Care Tower Expansion and recommendations to mitigate the effects of the project.





1. INTRODUCTION

Calvin, Giordano, and Associates Inc. (CGA) was assigned by Memorial Healthcare System (MHS) to complete a traffic impact study for the expansion of Memorial Regional Hospital (MRH) Surgical and Critical Care Tower in the City of Hollywood, Florida. The expansion is expected to be completed in 2030.

CGA has followed the methodology developed in collaboration with the City of Hollywood. This report summarizes the data collection, project trip generation, trip distribution and assignment, intersection analysis, and 95th percentile queueing analysis. The intersections analyzed are listed below:

- Johnson Street and N 35th Avenue (Signalized Intersection)
- Johnson Street and Park Road (Signalized Intersection)
- N 35th Avenue and Hospital Drive (Memorial Medical Office Centre Driveway) (Signalized Intersection)
- Garfield Street and N 35th Avenue (Roundabout)
- Garfield Street and N Park Road (Two-way Stop Controlled Intersection)
- Johnson Street and Emergency Entry Access (Two-way Stop Controlled Intersection)
- Johnson Street and N 38th Avenue (Employee Parking Access) (Two-way Stop Controlled Intersection)
- Johnson Street and N 46th Avenue (Signalized Intersection)

The following segments were analyzed:

- N 35th Avenue – North of Garfield Street
- N 35th Avenue – Between Garfield Street & Memorial Medical Office Centre Driveway
- N 35th Avenue – Between Memorial Medical Office Centre Driveway and Johnson Street
- Johnson Street - Between N 35th Avenue and Hospital Employee Parking Garage





The purpose of this study is to analyze the nearby impacted intersections and segments based on existing and future (2030) traffic due to the expansion of the Memorial Regional Hospital (MRH) Surgical and Critical Care Tower in Hollywood, Florida and provide conclusions and recommendations to mitigate the effects of the project. The study area is located in the City of Hollywood, Florida. The study area is shown in Figure 1 below. A copy of the site plan included in **Appendix A**

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Figure 1 Study Area



2. EXISTING CONDITIONS

An analysis of the study area was conducted to verify the intersections' geometry, pavement markings, signing, storage lengths, and lane assignments. The studied roads are described below:

Johnson Street: Johnson Street is a two-lane two-way street that runs in an east-west direction. The road has 12 feet lanes. This street provides turn lanes, sidewalks, and a marked median to separate opposing traffic. The posted speed limit on Johnson Street is 30 mph.

N 35th Avenue: N 35th Avenue is a wide roadway (average lane width 11 feet) and runs in a north-south direction. It is characterized by four lanes, two in each direction, divided by a median. The road has a posted speed limit of 30 mph.

N Park Road: N Park Road runs in a north-south direction. It is characterized by four lanes, two in each direction, divided by a grassed median. The lanes have a standard width of 12 feet, allowing for smooth traffic flow. The road has a posted speed limit of 30 mph.

N 46th Avenue: N 46th Avenue runs in a north-south direction. It is characterized by four lanes, two in each direction, divided by a grassed median. The lanes have a standard width of 12 feet, allowing for smooth traffic flow. The road has a posted speed limit of 30 mph.

Garfield Street: Garfield Street is an east-west, two-lane two-way traffic, local roadway with a posted speed limit of 30 mph. Garfield Street has a dead end at the west end of the road between N Park Road and N 35th Avenue. There is an existing gate at the west end of the road that will be open during the construction phase to allow construction traffic only. Figure 2 shows the permitted traffic movements at each of the studied intersections.





Figure 2 Permitted Movements



3. TRAFFIC OPERATION ANALYSIS

3.1 Traffic Data Collection

CGA collected 8-hr turning movement counts (TMC) on Wednesday, December 12, 2023, at seven intersections. The data includes heavy vehicles, bicycles, and pedestrians. Data was collected during the morning (6:00 AM – 10:00 AM) and afternoon (04:00 PM – 08:00 PM) periods within the study area. The peak periods were identified, and the peak periods volumes used to perform the analysis. The turning movement data is included in **Appendix B**.

The intersection signal timing data and phasing plans were obtained from the Broward County Traffic Engineering Division (BCTED) for the three signalized intersections within the study area. Copies of the existing signal timing and phasing diagrams are provided in **Appendix C**.

3.1.1 Adjustment Factors

The December 2023 and April 2025 turning movement counts were adjusted to peak season traffic data by applying the FDOT's Peak Season Conversion Factor (PSCF) of 1.03 and 1.00, respectively. The 2022 and 204 Peak Season is attached in **Appendix D**.

3.1.2 Future Traffic

Future traffic conditions are defined as the expected traffic conditions for the roadway network in the year 2030 without the construction of the project. The future traffic is estimated based on the expected growth of the area. Future total traffic volumes used in the analysis are the sum of the future traffic and additional traffic generated by the project. Volume development worksheets for the study intersections are included in **Appendix E**.



3.1.3 Background Area Growth

Traffic growth on the transportation network was determined based upon historic growth trends at nearby FDOT traffic count stations. FDOT count stations referenced in this analysis include:

- FDOT Count Station No. 8023 is located on Johnson Street, west of N 35th Avenue.
- FDOT Count Station No. 8008 is located on Johnson Street, east of N 35th Avenue
- FDOT Count Station No. 9622 is located on N Park Road, north of Johnson Street.
- FDOT Count Station No. 9623 is located on N 35th Avenue, south of Johnson Street.

The historic growth rate analysis, based on FDOT count stations, examined linear, exponential, and decaying exponential growth rates for the most recent five (5) and ten (10) year periods. The linear growth trend yielded a growth rate of negative 9.15%, so an annual growth rate of one percent (1.0%) in the vicinity of the redevelopment was calculated. To provide for a conservative analysis, the growth rate of one percent (1.0%) was applied annually to the existing traffic volumes for future (2030) traffic conditions. Detailed growth calculations are contained in **Appendix F**.

3.1.4 Project Traffic

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the project. The construction plan includes a surgical and critical care tower comprising 8 floors and a mechanical penthouse, with floors four through eight allocated for patient rooms. The trip generation considers the new tower with a total square footage of 404, 492 SF. Furthermore, the existing building has a square footage of 194, 830 SF.

3.1.4.1 Trip Generation

Trip generation calculations for the proposed expansion were performed using rates and/or equations contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition. The trip generation for the proposed project was determined using ITE Land Use Code (LUC) 610 Hospital. To provide a conservative analysis, credit for trips generated by the existing development was not taken in any of the analyses prepared in this study.





Table 1 Trip Generation from ITE

Existing Building				Existing Trips				
Land Use	Land Use Code	Units (1,000 sft GFA)	Equation	Directional Distribution		AM Peak Hour Trips (Gross)		
				IN	OUT	IN	OUT	Total
Hospital	610	195	$T = 0.82(X)$	67%	33%	107	53	160
Land Use	Land Use Code	Units	Equation	Directional Distribution		PM Peak Hour Trips (Gross)		
				IN	OUT	IN	OUT	Total
Hospital	610	195	$T = 0.86(X)$	35%	65%	59	109	168
Land Use	Land Use Code	Units	Equation	Directional Distribution		Daily Trips (Gross)		
				IN	OUT	IN	OUT	Total
Hospital	610	195	$T = 10.77 (X)$	50%	50%	1049	1049	2098
New Tower				Proposed Trips				
Land Use	Land Use Code	Units (1,000 sft GFA)	Equation	Directional Distribution		AM Peak Hour Trips (Gross)		
				IN	OUT	IN	OUT	Total
Hospital	610	404	$T = 0.82(X)$	67%	33%	222	110	332
Land Use	Land Use Code	Units	Equation	Directional Distribution		PM Peak Hour Trips (Gross)		
				IN	OUT	IN	OUT	Total
Hospital	610	404	$T = 0.86(X)$	35%	65%	122	226	348
Land Use	Land Use Code	Units	Equation	Directional Distribution		Daily Trips (Gross)		
				IN	OUT	IN	OUT	Total
Hospital	610	404	$T = 10.77 (X)$	50%	50%	2178	2178	4356
Net Difference				Net Trip Increase				
Land Use	Land Use Code	Units (1,000 sft GFA)	Equation	Directional Distribution		AM Peak Hour Trips		
				IN	OUT	IN	OUT	Total
Hospital	610	210	$T = 0.82(X)$	67%	33%	115	57	172
Land Use	Land Use Code	Units	Equation	Directional Distribution		PM Peak Hour Trips		
				IN	OUT	IN	OUT	Total
Hospital	610	210	$T = 0.86(X)$	35%	65%	63	117	180
Land Use	Land Use Code	Units	Equation	Directional Distribution		Daily Trips		
				IN	OUT	IN	OUT	Total
Hospital	610	210	$T = 10.77 (X)$	50%	50%	1129	1129	2258



Based on Table 1, the expansion of the hospital will generate an additional 2,258 daily trips and 172 trips and 180 trips during the AM peak and PM peak hours, respectively. The excerpts from the ITE manual are provided in **Appendix G**.

3.1.4.2 Trip Distribution

The trip distribution was determined based on the FDOT traffic online data, CGA's collected traffic data, and engineering judgement. Figure 3 below shows the trip distribution.



Figure 3 Trip Distribution

3.2 Intersection Capacity Analysis

The study area and surrounding network were modeled using Synchro 11 Signal Timing and Analysis Software (Synchro) to establish the Level of Service (LOS) for the intersections within the study area. Synchro applies methodologies outlined in the Highway Capacity Manual (HCM). The City of Hollywood has adopted Level of Service D as its operational standard. For each intersection, analyses were conducted for three different scenarios: existing conditions, future condition without project, and future total condition with project. The study intersections were evaluated for AM peak hours and PM peak hours. The existing volumes can be found in **Appendix E** after applying the Peak Season Correction Factor (PSCF) to determine the existing season volumes.



Table 2 below shows the Level of Service and delay for each intersection in the two peak hour scenarios for existing, future without project, and future total traffic with project. As shown, the intersections currently operate at an acceptable Level of Service of D or better.

After the completion of the project in 2030, the delays at Johnson Street and N 35 Avenue are expected to increase. The AM peak hour intersection average delay is 46.5 seconds, while the PM peak hours average intersection delay is 34.6 seconds. When comparing the 2030 scenario without project to the one with the project, there will be an increase of 15 seconds for the AM peak hours and 2.6 seconds for the PM peak hours, which results in LOS D for the AM Peak Period and PM Peak Period. N 35th Avenue and Hospital Drive (Memorial Medical Office Center Driveway) maintained the same LOS B from the No Build to the Build scenario. N Park Road and Johnson Street intersection average overall delay increased from 43.1 seconds to 45 seconds in the AM Peak, while the PM Peak Period increased from 40.1 seconds to 40.8 seconds. From the No Build to the Build condition, the LOS remains at D. N 46th Avenue and Johnson Street intersection average overall delay increased from 58.4 seconds to 59.1 seconds in the AM Peak and remained at LOS E. For the PM Peak Period the overall delay remained at 54 seconds with an LOS D. The northbound approach presents significant delays in the Existing, Future No Build, and the Future Build scenarios. From the No Build to the Build condition, the LOS remains at D. It is noted that Johnson Street and Employee Entrance Driveway intersection is controlled by a deputy during peak hours. As such, the model may not fully represent the actual operation of the intersection. The remaining four intersections are either stop-controlled or regulated by yield-control (roundabout), and the results show very minor changes in the delay. The Synchro output reports are included in **Appendix H**.





Table 2 Level of Service and Delay

Level of Service (LOS) and Delay														
Intersection	Intersection Control Type	Movement	Existing (2023)				Future No Build (2030)				Future Build (2030)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
N Park Road & Johnson Street	Signalized	EB	36.5	D	29.2	C	44.3	D	34.4	C	47.5	D	36.4	D
		WB	35.4	D	30.0	C	42.0	D	34.3	C	45.5	D	35.7	D
		NB	36.3	D	43.1	D	37.1	D	44.7	D	37.4	D	44.6	D
		SB	47.4	D	43.6	D	50.1	D	45.5	D	50.9	D	45.7	D
		Overall	38.8	D	36.9	D	43.1	D	40.1	D	45.0	D	40.8	D
N 35 th Avenue & Johnson Street	Signalized	EB	24.8	C	29.2	C	29.6	C	33.0	C	63.8	E	35.2	D
		WB	21.9	C	20.2	C	25.3	C	21.6	C	53.0	D	22.0	C
		NB	40.8	D	42.4	D	39.2	D	42.5	D	31.1	C	42.3	D
		SB	39.1	D	36.9	D	37.8	D	39.8	D	29.7	C	46.1	D
		Overall	29.8	C	29.7	C	31.5	C	32.0	C	46.5	D	34.6	C
N Park Road & Garfield Street	TWSC	EB	30.8	D	41.3	E	35.3	E	51	F	35.3	E	51	F
		WB	21.3	C	12.2	B	22.9	C	12.6	B	22.9	C	12.6	B
		NB	0		0		0		0		0		0	
		SB	0		0.1		0		0.1		0		0	
		Overall	0.2		0.3		0.2		0.3		0.2		0.3	
N 35 th Avenue & Garfield Street	Roundabout	EB	3.9	A	6.5	A	4.9	A	5.4	A	4.0	A	5.4	A
		WB	3.3	A	4.8	A	4.1	A	4.0	A	3.3	A	4.0	A
		NB	3.9	A	5.3	A	5	A	4.3	A	4.0	A	4.4	A
		SB	5.1	A	5.7	A	6.9	A	4.6	A	5.4	A	4.6	A
		Overall	4.6	A	5.8	A	6.1	A	4.7	A	4.8	A	4.8	A





Intersection	Intersection Control Type	Movement	Existing (2023)				Future No Build (2030)				Future Build (2030)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
N 35 th Avenue & MM Office Center Driveway	Signalized	EB	23.1	C	20.5	C	16.2	B	20.4	C	16.3	B	20.4	C
		NB	6.4	A	5.3	A	23.0	C	5.4	A	33.4	C	5.6	A
		SB	4.2	A	5.8	A	12	B	6.0	A	11.9	B	6.1	A
		Overall	8.4	A	11.2	B	18.5	B	11.3	B	33.4	C	11.7	B
Johnson Street and Emergency Driveway	TWSC	EB	2.2		1.1		2.3		1.1		2.3		1.3	
		WB	0		0		0		0		0		0	
		SB	27.1	D	25.2	D	32.3	D	30.1	D	43.9	E	39.5	E
		Overall	1.9		3.2		2.1		3.7		2.7		5	
Johnson Street and Employee Entrance Driveway*	TWSC*	EB	3.7		0.1		4.1		0.2		4.8		0.7	
		WB	0.1		0.1		0.1		0.1		0.1		0.1	
		NB	13	B	16.7	C	13.6	B	19	C	13.6	B		
		SB	18.6	C	33	D	19.7	C	38.7	E	22.4	C	58.4	F
		Overall	4.6		9.3		4.6		10.4		5.7		19	
N 46 th Avenue & Johnson Street	Signalized	EB	26.5	C	26.4	C	29.5	C	19.8	C	32.3	C	21.3	C
		WB	24.2	C	28.5	C	26.8	C	21.5	C	29.0	C	23.4	C
		NB	74.3	E	66.0	E	78.5	E	67.3	E	81.8	F	67.9	E
		SB	43.0	D	42.0	D	43.0	D	52.3	D	43.6	D	51.2	D
		Overall	43.3	D	39.9	D	45.7	D	39.1	D	47.8	D	39.6	D

*Intersection controlled by a deputy during peak hours. The model may not fully represent the actual operation of the intersection.





3.3 95th Percentile Queue Length Analysis

A 95th percentile queue analysis was performed for the turn lanes at the study intersections. A summary of the 95th percentile queues for the studied intersection movements is presented in Table 3. The table provides details of intersection control types, movements, and storage lengths for existing (2023), future no-build (2030), and future build (2030) scenarios during AM and PM peak hours. Additionally, it indicates instances where the 95th percentile volume exceeds capacity and where queue lengths are influenced by upstream signal metering.

The 95th percentile queue analysis shows increases in queue length derived from the yearly growth and additional increases resulting from additional traffic generated by the project in 2030. It is noted that queues at the intersection of Johnson Street and N 35 Avenue exceed the storage available in the Existing scenario. In general, in the No Build scenario queues increase across the network. For the Build scenario, the AM Peak Period shows larger increases in queue length for most intersections. It is noted that the left turn at the southbound approach at the intersection of Johnson Street and N 35th Avenue exceeds the storage. The N 46th Avenue and Johnson Street intersection saw an increase in the queues going from 160 ft to 189 ft during the AM Peak Period. The PM Peak Period saw a similar increase in the queues going from 132 ft to 148 ft.



Table 3 95th Percentile Queue Analysis

Intersection Queue Analysis									
Intersection	Intersection Control Type	Movement	Storage Length (ft)	Existing (2023)		Future No Build (2030)		Future Build (2030)	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
				Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)
N Park Road & Johnson Street	Signalized	EBL	210	171	231	194	#410	#257	#436
		EBR	200	39	53	46	97	50	109
		WBL	190	152	177	183	#317	189	#258
		WBR	360	49	56	53	60	58	59
		NBL	150	207	115	220	120	231	127
		NBR	150	65	80	75	104	75	101
		SBL	160	110	128	117	135	117	136
		SBR	160	85	102	86	126	112	127
N 35 th Avenue & Johnson Street	Signalized	EBL	130	46	33	43	36	57	37
		EBT	-	509	#588	#581	#672	#527	#713
		WBL	195	40	99	78	109	120	124
		WBT	-	542	427	#600	482	#788	500
		WBR	280	94	38	82	44	109	46
		NBL	155	223	74	227	77	229	82
		NBT	-	131	44	127	46	128	48
		NBR	155	56	47	54	51	49	50
		SBL	275	214	#348	218	#291	225	#353
		SBT	-	156	202	152	217	146	221
		SBR	280	2	47	0	51	0	54





Intersection Queue Analysis

Intersection Queue Analysis									
Intersection	Intersection Control Type	Movement	Storage Length (ft)	Existing (2023)		Future No Build (2030)		Future Build (2030)	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
				Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)
N 35 th Avenue & MM Office Center Dwy	Signalized	EBL	125	24	42	23	44	25	47
		SBT	-	66	91	129	100	129	104
		NBL	250	132	56	306	57	338	59
		NBT	-	44	36	84	39	47	41
N 46th Ave & Johnson Street	Signalized	EBL	220	85	44	86	23	86	46
		WBL	300	144	124	160	132	#189	148
		NBL	250	57	59	60	60	60	60
		NBR	250	92	0	108	0	118	9
		SBL	130	157	75	173	80	194	89
		SBR	130	26	1	32	6	32	6
Note: # 95th percentile volume exceeds capacity, queue may be longer. m Volume for 95th percentile queue is metered by upstream signal. *Intersection controlled by a deputy during peak hours.									





3.4 Intersection Improvement Plan

Considering the reduction in the Level of Service at the northbound approach of the intersection of N 46th Avenue and Johnson Street, a signal timing optimization was implemented. It should be noted that the intersection operates at a LOS D or better.

The results are documented in Table 4 Level of Service and Delay, and Table 5 Queue Length. The results show that optimizing the traffic signals for N 46th Avenue and Johnson Street could significantly improve the LOS and reduce delays at this intersection. The optimization was performed using Synchro and considered the optimization of the cycle and the splits.

Table 4 Level of Service and Delay with Signal Optimization

Intersection	Movement	Future Build (2030)				Future Build (2030) with Signal Optimization			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
N 46th Avenue & Johnson Street	EB	32.3	C	21.3	C	35.4	D	22.1	C
	WB	29.0	C	23.4	C	30.2	C	24.4	C
	NB	81.8	F	67.9	E	40.6	D	39.2	D
	SB	43.6	D	51.2	D	25.7	C	33.0	C
	Overall	47.8	D	39.6	D	32.9	C	29.3	C

Table 5 Intersection 95th Percentile Queue Length with Signal Optimization

Intersection	Intersection Control Type	Movement	Storage Length (ft)	Future Build (2030)		Future Build (2030) with Signal Optimization	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
				Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)
N 46th Avenue & Johnson Street	Signalized	EBL	220	86	46	66	34
		WBL	300	#189	148	#197	106
		NBL	250	60	60	43	45
		NBR	250	118	9	54	0
		SBL	130	194	89	#237	66
		SBR	130	32	6	1	0

With the optimized settings, the intersection's overall delay for the AM Peak Period decreased in 14.9 seconds, whereas for the PM Peak Period the signal optimization





reduced the overall delay in 10.3 seconds. This means going from LOS D to LOS C in the future conditions with the project for the AM Peak Period and in the PM Peak Period. Furthermore, the northbound approach delay improves significantly with a difference of 41.2 seconds and 28.7 seconds for the AM and PM Peak Periods, respectively. The optimization process was applied to balance the existing demand of the eastbound and westbound approaches and the demand from the southbound and northbound approaches.

The City of Hollywood has requested in a memorandum dated April 11, 2025 to test the future conditions analysis of the intersection of N 35th Avenue and Johnson Street with one westbound left-turn lane, one westbound through lane, and one westbound shared through/right-turn lane and an optimized signal timing. The results of implementing these changes are shown in Table 6 and Table 7.

Table 6 Level of Service and Delay with Modification and Signal Optimization

Intersection	Movement	Future Build (2030)				Future Build (2030) with Signal Optimization			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
N 35th Avenue & Johnson Street	EB	63.8	E	35.2	D	56.8	C	34.1	C
	WB	53.0	D	22.0	C	38.9	C	20.6	C
	NB	31.1	C	42.3	D	27.1	C	31.2	C
	SB	29.7	C	46.1	D	26.1	C	66.0	E
	Overall	46.5	D	34.6	C	38.0	D	38.3	D

Table 7 Intersection 95th Percentile Queue Length with Modification and Signal Optimization

Intersection	Intersection Control Type	Movement	Storage Length (ft)	Future Build (2030)		Future Build (2030) with Signal Optimization	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
				Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)
N 35th Avenue & Johnson Street	Signalized	EBL	220	57	376	45	30
		WBL	300	120	124	#117	#150
		NBL	250	229	82	171	31
		NBR	250	49	50	18	62
		SBL	130	225	#353	168	#397
		SBR	130	0	54	0	20





The implementation of the proposed configuration with one westbound left-turn lane, one westbound through lane, and one westbound shared through/right-turn lane and an the optimized signal timing appears to improve the operation of the intersection, except for the southbound approach which sees a significant increase in the delays for the PM Peak Period. Furthermore, this configuration requires the construction of two receiving lanes at the western approach of the intersection which is limited by the median and the existing left turn lane to access the Children's Emergency Entrance. The 95th Percentile Queues are reduced for several movements; however, the southbound left turn appears to increase in the PM Peak Period with is consistent with the increase in delays.

In addition, the City of Hollywood requested to run two PM peak hour scenarios with a traffic signal at the Employee Parking Garage as follows:

- 70% of the exiting traffic from the employee parking garage heading west on Johnson Street and the remaining 30% east on Johnson Street and then south on N Park Road.
- 50% of the exiting traffic heading west and the remaining 50% east on Johnson then south on N 35th Avenue.

For this scenario, the City requested to evaluate the Employee Parking Garage intersection, Emergency Entrance, N 35th Avenue & Johnson Street, and N 46th Avenue & Johnson Street intersection. The results of implementing 70% (right turns) and 30% left turns at the Employee Garage driveway are shown in Table 8 and Table 9. The results of implementing a 50% right turns and 50% left turns at the Employee Garage driveway are shown in Table 10 and Table 11. It should be noted that the intersections of Johnson Street and N 35th Avenue and Johnson Street and Employee Garage Driveway were optimized as part of this exercise to improve the operational performance of the system with the installation of the new signal at the Employee Garage Driveway.





Table 8 Level of Service and Delay with a 70/30 distribution exiting from the Employee Garage.

Intersection	Intersection Control Type	Movement	Future Build (2030)		Future Build 70/30 (2030)	
			PM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
N 46 th Avenue & Johnson Street	Signalized	EB	21.3	C	20.1	C
		WB	23.4	C	20.3	C
		NB	67.9	E	67.9	E
		SB	51.2	D	51.2	D
		Overall	39.6	D	54.2	D
N 35 th Avenue & Johnson Street	Signalized	EB	35.2	D	43.8	D
		WB	22.0	C	20.6	C
		NB	42.3	D	42.0	D
		SB	46.1	D	97.8	F
		Overall	34.6	C	50.7	D
Johnson Street and Emergency Driveway	TWSC	EB	1.3		0.9	
		WB	0		0	
		SB	39.5	E	56.1	F
		Overall	5		6.4	
Johnson Street and Employee Entrance Driveway*	TWSC/ Signalized 70/30	EB	0.7		14.6	B
		WB	0.1		28.9	C
		NB	93.2	F	319.4	F
		SB	58.4	F	43	D
		Overall	19		36.9	D

Table 9 95th Percentile Queue with a 70/30 distribution exiting from the Employee Garage.

Intersection	Intersection Control Type	Movement	Storage Length (ft)	Future No Build (2030)	Future Build 70/30 (2030)
				PM Peak Hour	PM Peak Hour
				Queue (ft)	Queue (ft)
N 46 th Avenue & Johnson Street	Signalized	EBL	220	46	46
		WBL	300	148	117
		NBL	250	60	60
		NBR	250	9	9
		SBL	130	89	89
		SBR	130	6	6
N 35 th Avenue & Johnson Street	Signalized	EBL	130	37	30
		WBL	195	124	#202
		WBR	280	46	36
		NBL	155	82	81
		NBR	155	50	35





Intersection	Intersection Control Type	Movement	Storage Length (ft)	Future No Build (2030)	Future Build 70/30 (2030)
				PM Peak Hour	PM Peak Hour
				Queue (ft)	Queue (ft)
		SBL	275	#353	#502
		SBR	280	54	38

The 70/30 distribution shows minor improvements for the westbound and eastbound approaches of N 46th Avenue and Johnson Street. The eastbound approach decreased 1.5 seconds, while the westbound approach decreased 3.1 seconds with the redistribution of traffic. The 95th Percentile Queues appear to decrease for the westbound left turning movement from 148 ft to 117 ft. The rest of the intersections saw consistent increases in delays, N 35th Avenue & Johnson Street went from LOS C to D, Johnson Street and Emergency Driveway with a delay of 5 seconds to 6.4 seconds, and Johnson Street and Employee Entrance Driveway with a delay of 19 seconds to 36.9 seconds.

Table 10 Level of Service and Delay with a 50/50 distribution exiting from the Employee Garage.

Intersection	Intersection Control Type	Movement	Future Build (2030)		Future Build 50/50 (2030)	
			PM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
N 46 th Avenue & Johnson Street	Signalized	EB	21.3	C	19.7	B
		WB	23.4	C	18.5	B
		NB	67.9	E	67.9	E
		SB	51.2	D	51.2	D
		Overall	39.6	D	39.8	D
N 35 th Avenue & Johnson Street	Signalized	EB	35.2	D	63.1	E
		WB	22.0	C	31.7	C
		NB	42.3	D	62.9	E
		SB	46.1	D	92.5	F
		Overall	34.6	C	61.0	E
	TWSC	EB	1.3		0.8	
		WB	0		0	





Johnson Street and Emergency Driveway		SB	39.5	E	74.2	F
		Overall	5		7.9	
Johnson Street and Employee Entrance Driveway*	TWSC/ Signalized 50/50	EB	0.7		18.1	B
		WB	0.1		38.3	D
		NB			418.2	F
		SB	58.4	F	63	E
		Overall	19		49.6	D

Table 11 95th Percentile Queue with a 50/50 distribution exiting from the Employee Garage.

Intersection	Intersection Control Type	Movement	Storage Length (ft)	Future No Build (2030)	Future Build 50/50 (2030)
				PM Peak Hour	PM Peak Hour
				Queue (ft)	Queue (ft)
N 46 th Avenue & Johnson Street	Signalized	EBL	220	46	46
		WBL	300	148	101
		NBL	250	60	60
		NBR	250	9	9
		SBL	130	89	89
		SBR	130	6	6
N 35 th Avenue & Johnson Street	Signalized	EBL	130	37	32
		WBL	195	124	#230
		WBR	280	46	33
		NBL	155	82	110
		NBR	155	50	37
		SBL	275	#353	#649
		SBR	280	54	56

The 50/50 distribution shows minor improvements for the westbound and eastbound approaches of N 46th Avenue and Johnson Street. The eastbound approach decreased 2.3 seconds, while the westbound approach decreased 4.9 seconds. The 95th Percentile Queues decreased for the westbound left turning movement from 148 ft to 101 ft. As with the 70/30 distribution, the rest of the intersections saw consistent decay in the LOS, N 35th Avenue & Johnson Street went from LOS C to E, Johnson Street and Emergency Driveway with a delay of 5 seconds to 7.9 seconds, and Johnson Street and Employee Entrance Driveway with a delay of 19 seconds to 49.6 seconds.



4. ROADWAY SEGMENTS ANALYSIS

The CGA traffic team also analyzed the roadway segment along N 35th Avenue between Johnson Street and Garfield Street and the segment of Johnson Street between N 35th Avenue and the Hospital Employee Parking Garage by following FDOT's latest Q/LOS procedures (2023). The N 35th Avenue between Johnson Street and Garfield Street is segmented into three different segments, and a total of four segments were analyzed in this study.

- N 35th Avenue – North of Garfield Street
- N 35th Avenue – Between Garfield Street & Memorial Medical Office Centre Driveway
- N 35th Avenue – Between Memorial Medical Office Centre Driveway and Johnson Street
- Johnson Street - Between N 35th Avenue and Hospital Employee Parking Garage

The area is considered as C5 – Urban Center based on the FDOT Context Classification. In the new 2023 FDOT Q/LOS procedures, the Generalized Service Volume Tables for highways and arterials are organized by context classification rather than area type. An excerpt of the FDOT context classification is shown in Figure 4 below and Table 12 provides the generalized service volume based on the context classification.



Figure 4 FDOT Context Classification

Table 12 FDOT Generalized Service Volume Tables

FDOT

C2T, C4, C5, & C6

Motor Vehicle Arterial Generalized Service Volume Tables

(C2T Rural Town)

Peak Hour Directional

	B	C	D	E
1 Lane	*	720	940	**
2 Lane	*	1,590	1,680	**
3 Lane	*	2,120	2,530	**

Peak Hour Two-Way

	B	C	D	E
2 Lane	*	1,310	1,730	**
4 Lane	*	2,070	2,980	**
6 Lane	*	3,890	4,580	**

AADT

	B	C	D	E
2 Lane	*	11,800	18,000	**
4 Lane	*	21,800	31,400	**
6 Lane	*	40,500	48,000	**

(C4 Urban General)

	B	C	D	E
1 Lane	*	*	870	1,100
2 Lane	*	1,120	1,790	2,000
3 Lane	*	2,230	2,810	2,990
4 Lane	*	2,590	3,310	3,530

	B	C	D	E
2 Lane	*	*	1,580	2,100
4 Lane	*	2,200	3,250	3,670
6 Lane	*	4,020	5,130	5,440
8 Lane	*	4,710	6,020	6,380

	B	C	D	E
2 Lane	*	*	17,400	24,000
4 Lane	*	24,400	36,100	40,800
6 Lane	*	44,700	56,800	60,400
8 Lane	*	52,300	66,900	70,900

(C5 Urban Center)

	B	C	D	E
1 Lane	*	*	890	1,090
2 Lane	*	1,280	1,960	2,430
3 Lane	*	1,810	2,670	3,110
4 Lane	*	2,910	3,580	3,940

	B	C	D	E
2 Lane	*	*	1,250	1,960
4 Lane	*	2,560	4,920	5,910
6 Lane	*	2,560	4,850	5,650
8 Lane	*	5,280	6,470	6,620

	B	C	D	E
2 Lane	*	*	13,900	21,800
4 Lane	*	28,400	53,900	62,800
6 Lane	*	28,400	53,900	62,800
8 Lane	*	58,800	71,900	73,600

(C6 Urban Core)

	B	C	D	E
1 Lane	*	***	790	1,030
2 Lane	*	***	1,490	1,920
3 Lane	*	***	2,730	2,940
4 Lane	*	***	3,250	3,490

	B	C	D	E
2 Lane	*	***	1,440	1,870
4 Lane	*	***	2,710	3,490
6 Lane	*	***	4,960	5,350
8 Lane	*	***	5,910	6,350

	B	C	D	E
2 Lane	*	***	16,000	20,800
4 Lane	*	***	30,100	38,800
6 Lane	*	***	55,100	59,600
8 Lane	*	***	65,700	70,900

Adjustment Factors

The peak hour directional service volumes should be adjusted by multiplying by 1.2 for one-way facilities.
 The AADT service volumes should be adjusted by multiplying by 1.2 for one-way facilities (2 Lane Double).
 Roadway with an (unbalanced) left turn lane(s): Multiply by 1.05.
 2 Lane Unbalanced Roadway with two (unbalanced) Turn Lane(s): Multiply by 1.08.

Unbalanced Right Turn Lane(s): Multiply by 1.04.
 Multi-lane (Unbalanced) Roadway with an (unbalanced) Left Turn Lane(s): Multiply by 0.75.
 Multi-lane Roadway with two (unbalanced) Left Turn Lane(s): Multiply by 0.75.
 Non-Major Arterial Roadway: Multiply by 0.90.

This table does not consider for independent use and should be used only for project planning applications. The table should not be used for cost estimates or intersection design, where more refined techniques exist.

* Cannot be achieved using HCM input value defaults. ** Not applicable for that level of service (e.g., Level of Service D because F-based values for that level of service have been reached).

*** HCM C-60 values are not applicable for 12- or 16-lane facilities and various planning and design use estimates are not available.

The roadway segment analysis for N 35th Avenue and Johnson Street, was conducted for the existing year (2024) with projections for the future year (2030), both with and without the project. Table 13 shows the results of roadway segment analysis.



Table 13 Roadway Segments Analysis

Roadway	Segment	2023 (Existing Year)						Future Year (2030) without Project						Future Year (2030) with Project Traffic					
		Daily Conditions			Peak Hour Conditions			Daily Conditions			Peak Hour Conditions			Daily Conditions			Peak Hour Conditions		
		AADT	Capacity at "LOS D"	LOS	Volume	Capacity at "LOS D"	LOS	AADT	Capacity at "LOS D"	LOS	Volume	Capacity at "LOS D"	LOS	AADT	Capacity at "LOS D"	LOS	Volume	Capacity at "LOS D"	LOS
N 35th Avenue	North of Garfield Street	4141	10008	D	420	1250	D	4440	10008	D	450	1250	D	4553	10008	D	459	1250	D
	Between Garfield Street & Memorial Medical Office Centre Driveway	5743	12479	D	503	1250	D	6157	12479	D	539	1250	D	6270	12479	D	548	1250	D
	Between Memorial Medical Office Centre Driveway and Johnson Street	11663	11885	D	900	1250	D	12504	11885	E	965	1250	D	12617	11885	E	974	1250	D
Johnson Street	Between N 35th Avenue and Hospital Employee Parking Garage	20828	36194	C	1697	3450	C	22330	36194	C	1819	3450	C	22443	36194	C	1828	3450	C
Note: 1. Context Classification - C5 Urban Center 2. "LOS D" Capacity for AADT Calculation Adjustment a. 2 Lane Divided Roadway with an exclusive left turn lane (s): Multiply by 1.05 b. Non-State Signalized Roadway : Multiply by 0.90. c. Multilane Undivided Roadway with an exclusive Left Turn Lane (s) : Multiply by 0.95 d. Exclusive Right Turn Lane(s): Multiply by 1.05 e. 2 lane Undivided Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.80																			





The analysis focuses on daily and peak hour traffic conditions, considering Average Annual Daily Traffic (AADT) and capacity at Level of Service D.

- For N 35th Avenue north of Garfield Street, the AADT increases from 4,141 in 2023 to 4,440 in 2030 without the project, and to 4,553 with the project. Despite these increases, the LOS remains at D for both daily and peak hour conditions, suggesting that traffic conditions are expected to deteriorate slightly but will maintain the same LOS.
- N 35th Ave Between Garfield Street and Memorial Medical Office Centre Driveway, AADT rises from 5,743 in 2023 to 6,157 in 2030 without the project and 6,270 with the project. Similarly, the LOS remains at D for all analyzed conditions, indicating a stable traffic flow.
- N 35th Ave Between Memorial Medical Office Centre Driveway and Johnson St, an increase in AADT is observed from 11,663 in 2023 to 12,504 in 2030 without the project, and 12,617 with the project. This segment experiences a deterioration in LOS from D in 2023 to E in 2030 due to the regular growth of the network and retains the same LOS E before and after the implementation of the project.
- For Johnson Street between N 35th Avenue and N Park Road, the data shows a stable traffic condition with a slight increase in AADT from 20,828 in 2023 to 22,330 in 2030 without the project, and to 22,443 with the project. The LOS remains at C for all conditions, indicating that this segment can manage the traffic volume efficiently compared to the segments on N 35th Avenue.

Overall, the analysis suggests that the analyzed segments could retain the same base level of service (2030) even when the traffic increases influenced by the proposed project. In addition, Johnson Street is expected to maintain its current Level of Service despite increased traffic volumes.

5. CONCLUSIONS AND RECOMMENDATIONS

The traffic impact study conducted by Calvin, Giordano, and Associates Inc. (CGA) for the expansion of Memorial Regional Hospital (MRH) Surgical and Critical Care Tower in the City of Hollywood, Florida, analyzed the potential traffic effects on the surrounding



road network. The study examined existing, future without project, and future with buildout traffic, focusing on key intersections and roadway segments within the study area.

The findings from the intersection analysis, 95th percentile queueing analysis, and roadway segment analysis indicate that while some intersections and roadway segments can maintain acceptable Levels of Service through 2030, others are expected to experience a slight reduction in the Level of Service due to the expansion of Surgical and Critical Care Tower of MRH. Specifically, the study shows that the Level of Service of the intersection of N 46th Avenue and Johnson Street is expected to decline along with the storage capacity at certain movements.

Additional measures were explored to improve the network operation. For the intersection of N 35th Avenue and Johnson Street, the implementation of a one westbound left-turn lane, one westbound through lane, and one westbound shared through/right-turn lane and the optimization of the signal timing. This modification appears to improve the operation of the intersection, except for the southbound approach which sees a significant increase in the delays for the PM Peak Period. Furthermore, this configuration requires the construction of two receiving lanes at the western approach of the intersection which is limited by the median and the existing left turn lane to access the Children's Emergency Entrance.

The implementation of a traffic signal at the Employee Garage driveway was analyzed using a 70/30 and a 50/50 distribution for the exiting right- and left turning vehicles for the PM Peak Period. This change generated minor improvements at the intersection of N 46th Avenue and Johnson Street. Furthermore, the rest of the intersections saw increased delays and queues.

Based on the findings of this traffic impact study, CGA recommends the following actions to mitigate the anticipated traffic impacts at the intersection of N 46th Avenue and Johnson Street associated with the MRH expansion:

- **Intersection Improvements:** Implement signal optimization at N 46th Avenue and Johnson Street, to improve traffic flow and enhance the Level of Service. This





includes adjusting signal timings to better accommodate peak-hour traffic volumes. Potential modifications to the signal plan may be applied during peak hours to improve flow southbound approach.

In addition, the City has requested additional improvements that should be explored. The feasibility of implementing such improvements has not been determined since geometrical constraints may limit the Right-of-Way availability.

- **Intersection Improvements at Johnson St and N 46th Ave:** Extend the westbound left turn lane length to 200 feet total and add a right turn lane expanding to the median. Right-of-way availability needs to be studied for the implementation of such improvements.
- **Intersection Improvements at Johnson St and N 35th Ave:** Add a westbound continuous right turn lane from the N 35th Avenue and Johnson St intersection to the Emergency Entrance. Right-of-way availability needs to be studied for the implementation of such improvement.
- **Intersection Improvements at Johnson St and Employee Garage:** Increase the number of traffic officers from 1 to 2 officers. This should allow the left turn movements during peak periods.
- **Intersection Improvements at Johnson St and N Park Rd:** Restripe to extend the eastbound left turn lane length and remove the two-way left turn lane shared left turn lane.

These recommendations aim to ensure that the roadway network surrounding MRH can accommodate the increased traffic demand resulting from the hospital's expansion, thereby minimizing the impact on the surrounding community, and maintaining efficient and safe traffic conditions.





Appendix List

APPENDIX A – Site Plan

APPENDIX B – Turning Movement Count Data

APPENDIX C – Signal Timing and Phasing Diagrams

APPENDIX D – Peak Season Conversion Factor

APPENDIX E – Volume Worksheet

APPENDIX F – Growth Rate

APPENDIX G – Trip Generation excerpts from ITE Manual

APPENDIX H – Synchro Results





APPENDIX A – Site Plan



MEMORIAL REGIONAL HOSPITAL SURGICAL & CRITICAL CARE TOWER EXPANSION



CITY OFFICIALS

MAYOR
JOSH LEVY

COMMISSIONERS
CARYL S. SHUMAN
LINDA HILL ANDERSON
TRACI L. CALLARI
ADAM GRUBER
KEVIN D. BIEDERMAN
IDELMA QUINTANA

LEGEND

MATERIALS

	CONCRETE/PRECAST CONCRETE
	SOIL
	SAND, EIFS FINISH COAT, OR CEMENT PLASTER
	CMU
	STONE
	GLASS MINERAL FIBER BATT INSULATION
	GLASS MINERAL FIBER SEMI-RIGID INSULATION
	MINERAL WOOL SEMI-RIGID INSULATION
	EXPANDED POLYSTYRENE RIGID INSULATION
	EXTRUDED POLYSTYRENE RIGID INSULATION
	POLYISOCYANURATE RIGID INSULATION
	GYPSUM BOARD
	EXTERIOR GYPSUM SHEATHING
	EXTERIOR CEMENT BOARD
	COATED GLASS MAT WATER-RESISTANT GYP BD
	PLYWOOD
	COVER BOARD

DRAWING SYMBOLS

	ROOM NAME
	ROOM NAME/NUMBER
	EXISTING COLUMN CENTERLINE
	COLUMN CENTERLINE
	BUILDING WALL SECTION
	ELEVATION
	SECTION DETAIL
	PLAN, BLOW-UP DETAIL
	INTERIOR ELEVATION INDICATOR
	EDGE OF SLAB
	FACE OF BUILDING
	BUILDING EXPANSION JOINT
	CMU WALL
	NEW WALL
	EXISTING WALL
	DEMO WALL
	1 HOUR FIRE WALL
	2 HOUR FIRE WALL
	3 HOUR FIRE WALL
	NON-RATED SMOKE WALL
	1 HOUR SMOKE WALL
	2 HOUR SMOKE WALL
	1 HOUR SHAFT WALL
	2 HOUR SHAFT WALL

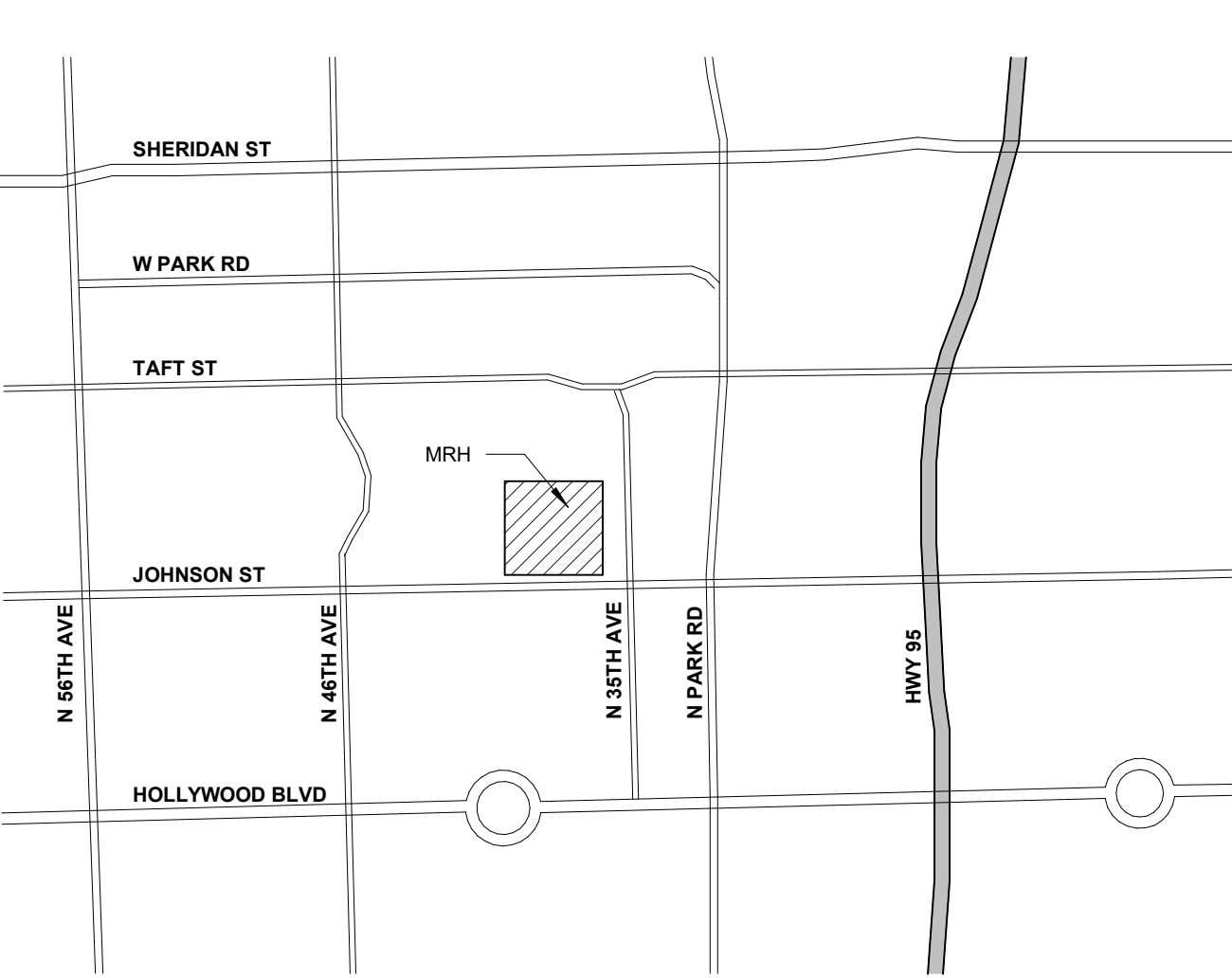
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LEGAL DESCRIPTION:
HOLLYWOOD HILLS 6-22 B ALL OF BLKS 46,47,48,POR OF BLK 82,83,84,85 AS IN OR 46465/713 TOG W/STS & ALLEYS VAC IN DB 764/208 & 21384/16 & A POR OF ALLEY DESC'D IN OR 48015/989, TOG W/POR OF BLK 15,16,17 DESC AS BEG NW COR LOT 37 BLK 17, E 215,S 790,E 85,S 125,W 190, N 140,W 110,N 775 TO POB,TOG W/LOT 32 BLK 16

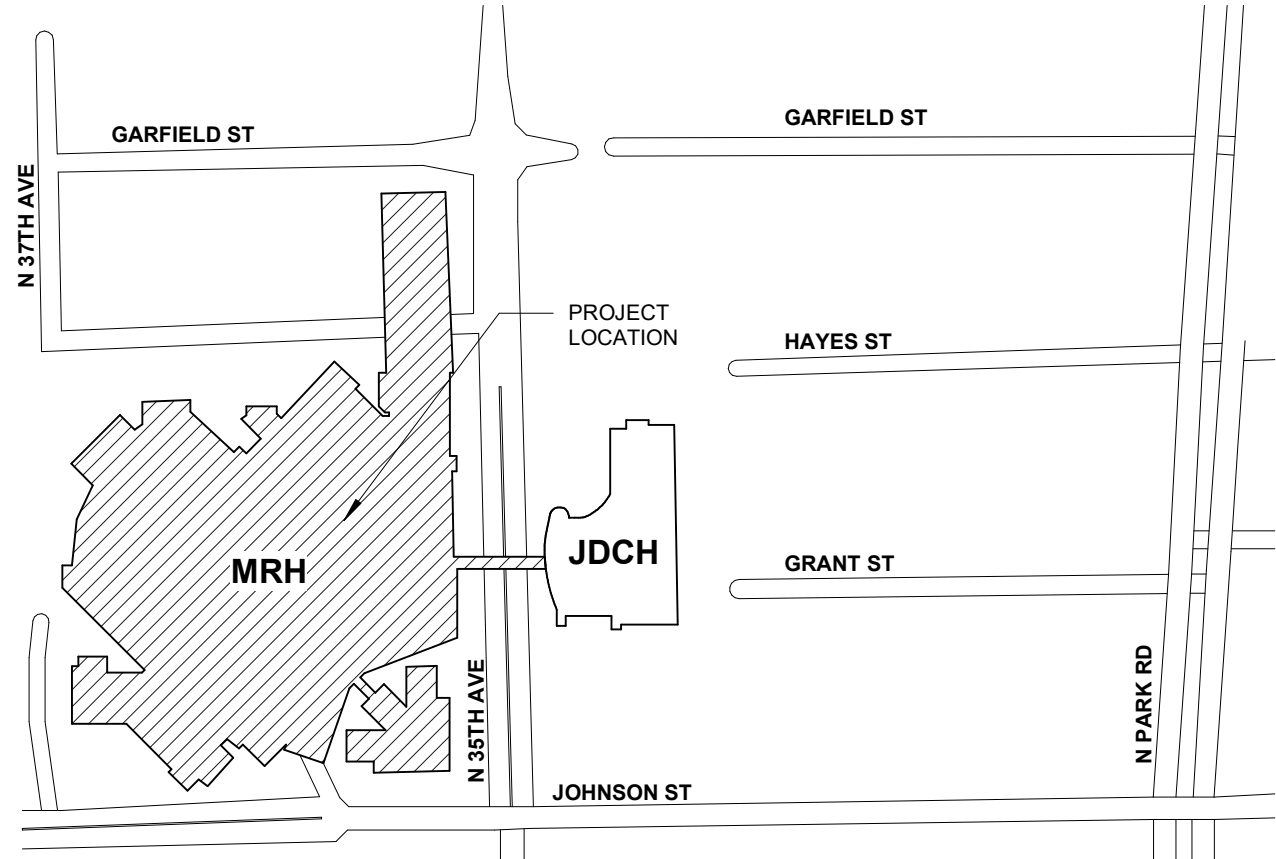
MEETING DATES

BOARD/COMMITTEE	DATE
P.A.C.O.	05/22/2023
PRELIMINARY TAC MEETING	05/06/2024
FINAL TAC MEETING	06/17/2024
FINAL TAC MEETING	08/19/2024
FINAL TAC SIGN-OFF SUBMISSION	02/17/2025
PLANNING DEVELOPMENT BOARD MEETING	04/08/2025

VICINITY MAP



LOCATION MAP



INDEX OF DRAWINGS

INDEX OF DRAWINGS - TAC		DATE		
		APR 15, 2024 - PRELIMINARY TAC	JUN 17, 2024 - FINAL TAC	AUG 19, 2024 - FINAL TAC
Sheet Number	SHEET NAME			
SURVEY				
SITE PLAN				
SP-100	OVERALL SITE PLAN			
SP-200	PROJECT SITE PLAN			
SP-301	HARDSCAPE PAVING PLAN			
SP-302	HARDSCAPE PAVING DESIGN			
SP-401	ENLARGEMENT PLANS - CORNER PLAZA			
SP-402	ENLARGEMENT PLANS - CORNER PLAZA			
SP-403	SITE PLAN			
SP-404	FURNISHING DETAILS			
SURVEY				
S01	ALTA ACSM LAND TITLE SURVEY MAP OF BOUNDARY SURVEY			
S02	ALTA ACSM LAND TITLE SURVEY MAP OF BOUNDARY SURVEY			
S03	ALTA ACSM LAND TITLE SURVEY MAP OF BOUNDARY SURVEY			
S04	ALTA ACSM LAND TITLE SURVEY MAP OF BOUNDARY SURVEY			
S05	ALTA ACSM LAND TITLE SURVEY MAP OF BOUNDARY SURVEY			
CIVIL				
C01	LEGENDS, ABBREVIATIONS AND GENERAL NOTES			
C02	DEMOLITION NOTES			
C03	PAVING, GRADING AND DRAINAGE PLAN			
C04	PAVING, GRADING AND DRAINAGE DETAILS			
C05	PAVING, GRADING AND DRAINAGE DETAILS			
C05A	PAVING, GRADING AND DRAINAGE DETAILS			
C05B	PAVING, GRADING AND DRAINAGE DETAILS			
C06	UTILITY PLAN			
C07	UTILITY DETAILS			
C08	UTILITY DETAILS			
C09	SIGNING AND PAVEMENT MARKING PLAN			
C10	SIGNING AND PAVEMENT MARKING DETAILS			
C11	STORMWATER POLLUTION PREVENTION PLAN			
C12	SIGNING AND PAVEMENT MARKING DETAILS			
C13	STORMWATER POLLUTION PREVENTION PLAN NOTES & SPECIFICATIONS			
C14	STORMWATER POLLUTION PREVENTION PLAN CONTRACTOR FORMS			
LANDSCAPE				
LD-001	TREE AND PALM DISPOSITION NOTES AND SCHEDULES			
LD-002	TREE AND PALM DISPOSITION PLAN			
L-001	PROPOSED PLANTING NOTES AND SCHEDULES			
L-100	OVERALL PLANTING PLAN			
L-401	ENLARGEMENT PLANTING PLANS - CORNER PLAZA			
L-402	ENLARGEMENT PLANTING PLANS - LEVEL 3 COURTYARD			
ARCHITECTURE				
A01	COVER, PROJ INFO, INDEX OF DRAWINGS			
A02-A	ARCHITECTURAL SITE PLAN - CIRCULATION DIAGRAM			
A02-B	MASTER PLAN			
A03	LEVEL 01 OVERALL FLOOR PLAN			
A04	LEVEL 02 OVERALL FLOOR PLAN			
A05	LEVEL 03 OVERALL FLOOR PLAN			
A06	LEVEL 04 OVERALL FLOOR PLAN			
A07	LEVEL 05, 06, 07 & 08 OVERALL FLOOR PLAN			
A08	PENTHOUSE & ROOF OVERALL FLOOR PLAN			
A12	ELEVATION SIGHT LINES			

BUILDING SUMMARY

PROJECT INFORMATION
PROJECT NAME: MRH - SURGICAL & CRITICAL CARE TOWER EXPANSION
ADDRESS: 3501 JOHNSON STREET, HOLLYWOOD, FL 33021
PROPOSED USE: HOSPITAL
OWNER/CONTACT PERSON: KIM PAEZ
PHONE: 854-265-8672

APPLICABLE CODES
- BUILDING CODE: FBC 2023 (8TH EDITION)
- MECHANICAL, FBC, MECHANICAL, 2023 (8TH EDITION)
- PLUMBING, FBC, PLUMBING, 2023 (8TH EDITION)
- ELECTRICAL: 2023 NATIONAL ELECTRICAL CODE NFPA 70 (8TH EDITION)
- ENERGY CODE: FBC, ENERGY CONSERVATION, 2020 (7TH EDITION)
- LIFE SAFETY CODE:
- NFPA 101 - LIFE SAFETY CODE 2012 AND 2015
- NFPA 1 - FLORIDA FIRE PREVENTION CODE 2020
- FIRE MARSHAL'S RULE 89A-3.012 F.A.C.

- STATE/CITY AMENDMENTS: HOLLYWOOD, FLORIDA, CODE OF ORDINANCES
- ACCESSIBILITY CODE: FBC, ACCESSIBILITY, 2023 (8TH EDITION)
- FGI GUIDELINES FOR DESIGN AND CONSTRUCTION OF HEALTHCARE FACILITIES, 2018 EDITION

BUILDING PLANNING

OCCUPANCY: I-2 INSTITUTIONAL (FBC) - HEALTHCARE (NFPA 101)
MIXED OCCUPANCY? NO
REQUIRED FIRE SEPARATION: 2 HOUR

TYPE OF CONSTRUCTION

CONSTRUCTION TYPE: IA-1-333 - UNLIMITED (NOT COMBUSTIBLE AND RATED)
STRUCTURAL FRAME AND FLOOR CONSTRUCTION 1 HOUR DEDUCTION FOR FULLY SPRINKLERED BUILDINGS PER FBC 403.2.1

ESSENTIAL FACILITY (CHAPTER 16, IBC)

ESSENTIAL FACILITY? YES

GENERAL BUILDING LIMITATIONS

HIGH RISE? YES

ITEM	FBC	ACTUAL / PROVIDED
HEIGHT OF BUILDING	MAX HEIGHT IS 120'-0" PER ILA	119'-11" (ROOF) - 105'-7" (OCC FLR)
NUMBER OF STORIES	UNLIMITED	8 STORIES
TOTAL AREA OF BUILDING	UNLIMITED	404,492 SF (NEW EXPANSION) 209,862 SF (NET INCREASE)
PENTHOUSE AND ROOF STRUCTURE	UNLIMITED	119'-11" (MECH PENTHOUSE)
PARKING SPACES	STD: N/A ACC: N/A TTL: N/A	STD: N/A ACC: N/A TTL: N/A

FIRE PROTECTION SYSTEMS

- FIRE EXTINGUISHING SYSTEM: YES TYPE: APPROVED AUTOMATIC SPRINKLER SYSTEM (AASS)
- STANDPIPE SYSTEM: YES CLASS: 1
- SMOKE CONTROL:
- POST-FIRE EVACUATION
- STAIR SHAFT PRESSURIZATION
- ELEVATOR HOISTWAY PROTECTION BY (PRESSURIZATION - FBC SECTION 909.21)

SITE NOTES

- LIGHTING FOOTCANDLES ARE NOT TO EXCEED 1% AT ANY PROPERTY LINE. THIS IS FURTHER LIMITED TO 0.5% WHERE ADJACENT TO RESIDENTIAL PROPERTY.
- THIS PROJECT IS INTENDED TO COMPLY WITH THE CITY OF HOLLYWOOD'S GREEN BUILDING ORDINANCE.
- ALL SIGNAGE SHALL BE IN COMPLIANCE WITH THE ZONING AND LAND DEVELOPMENT REGULATIONS.
- ALL SIGNS, WHICH ARE ELECTRICALLY ILLUMINATED BY NEON OR OTHER MEANS, SHALL REQUIRE A SEPARATE ELECTRICAL PERMIT AND INSPECTION. SEPARATE PERMITS ARE REQUIRED FOR EACH SIGN.
- THIS PROJECT IS INTENDED TO ACHIEVE LEED CERTIFICATION.

BED COUNT

LOCATION	EXISTING BED COUNT	BEDS ADDED DURING CONSTRUCTION	TOTAL BEDS
JDCH	216	0	216
MRH	647	150	797
TOTAL	863	150	1013

HKS

ARCHITECT
HKS ARCHITECTS, INC.
2020 SALZEDO STREET, 4TH FLOOR
CORAL GABLES, FL 33134

INTERIOR DESIGNER
HKS ARCHITECTS
225 EAST ROBINSON ST, SUITE #405
ORLANDO, FL 32801

CIVIL & LANDSCAPE
CGA SOLUTIONS
1800 ELLER DRIVE, SUITE 600
FORT LAUDERDALE, FL 33316

STRUCTURAL ENGINEER
GNG STRUCTURAL ENGINEERS
14335 COMMERCE WAY
MIAMI LAKES, FL 33316

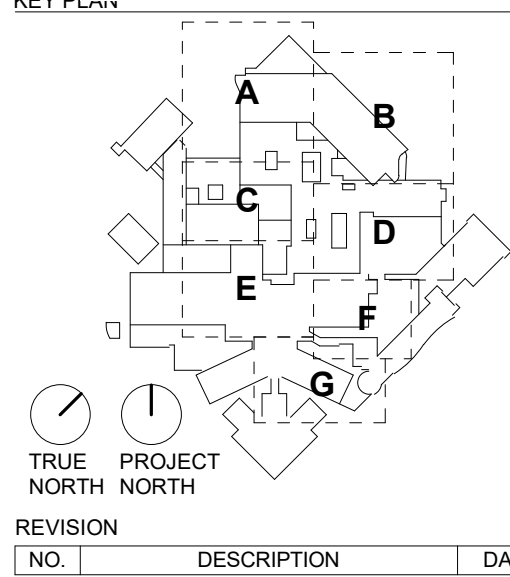
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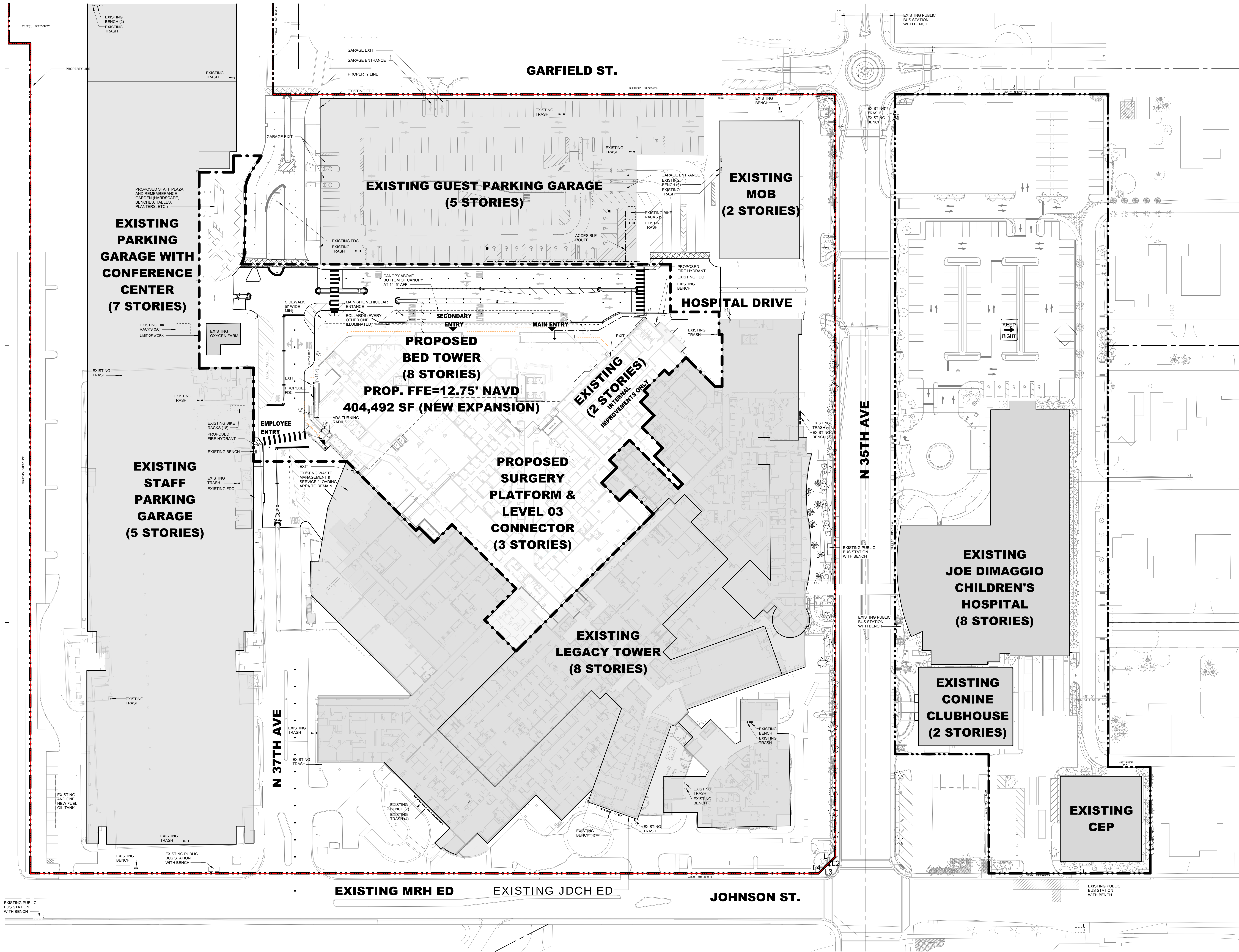
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MODEL: Autodesk Docs (23459.00) JRN: Surgery (01) Tower 2023A JRN: SURGERY TOWER SHELL CORE 2021.v4
TEMPLATE VERSION: 21.0.0.20200831



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CORAL GABLES, FL 33134

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ORLANDO, FL 32801

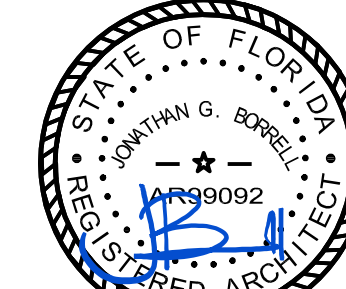
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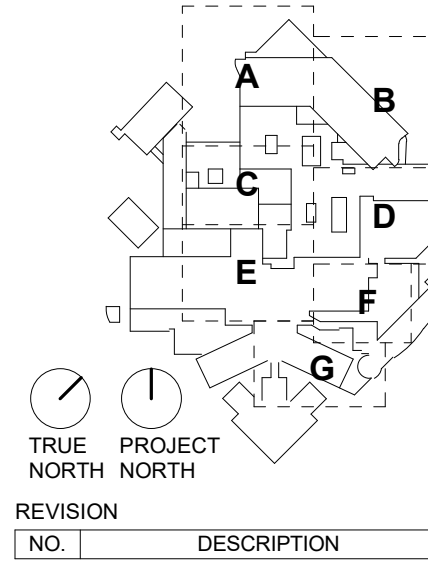
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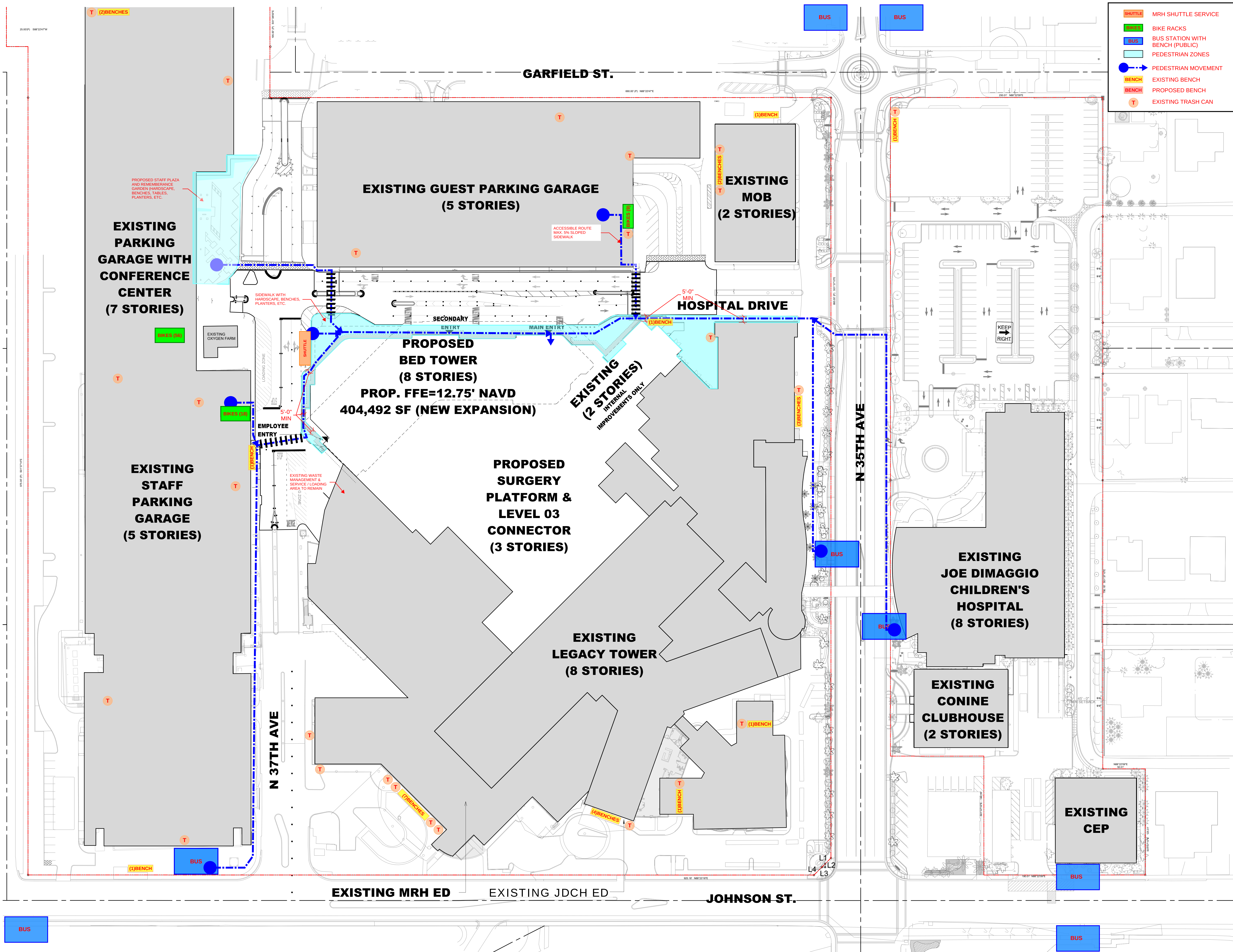
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AHCA PROJECT ID:
15005
HKS PROJECT NUMBER
23459.000
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SHEET TITLE
ARCHITECTURAL SITE
PLAN

SHEET NO.
A02

01 ARCHITECTURAL SITE PLAN
1" = 40'-0"

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TEMPLATE VERSION: 21.0.0.20200831



01 ARCHITECTURAL SITE PLAN - CIRCULATION DIAGRAM
1" = 40'-0"

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CORAL GABLES, FL 33134

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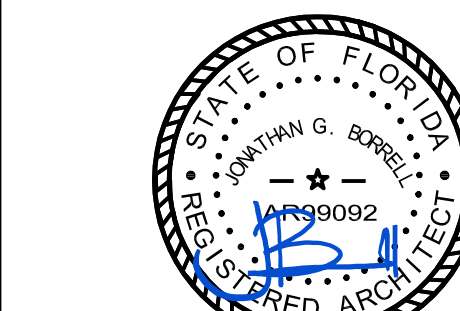
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TLC ENGINEERING SOLUTIONS, INC.
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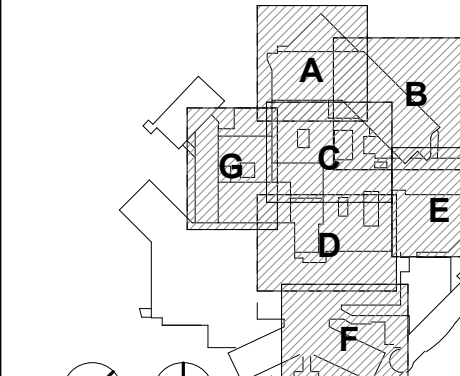
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NASHVILLE, TN 37204

OWNER
MEMORIAL HEALTHCARE SYSTEM
3501 JOHNSON STREET
HOLLYWOOD, FL 33021

Memorial
Regional Hospital
SURGICAL & CRITICAL CARE TOWER EXPANSION
3501 JOHNSON STREET, HOLLYWOOD, FL 33021



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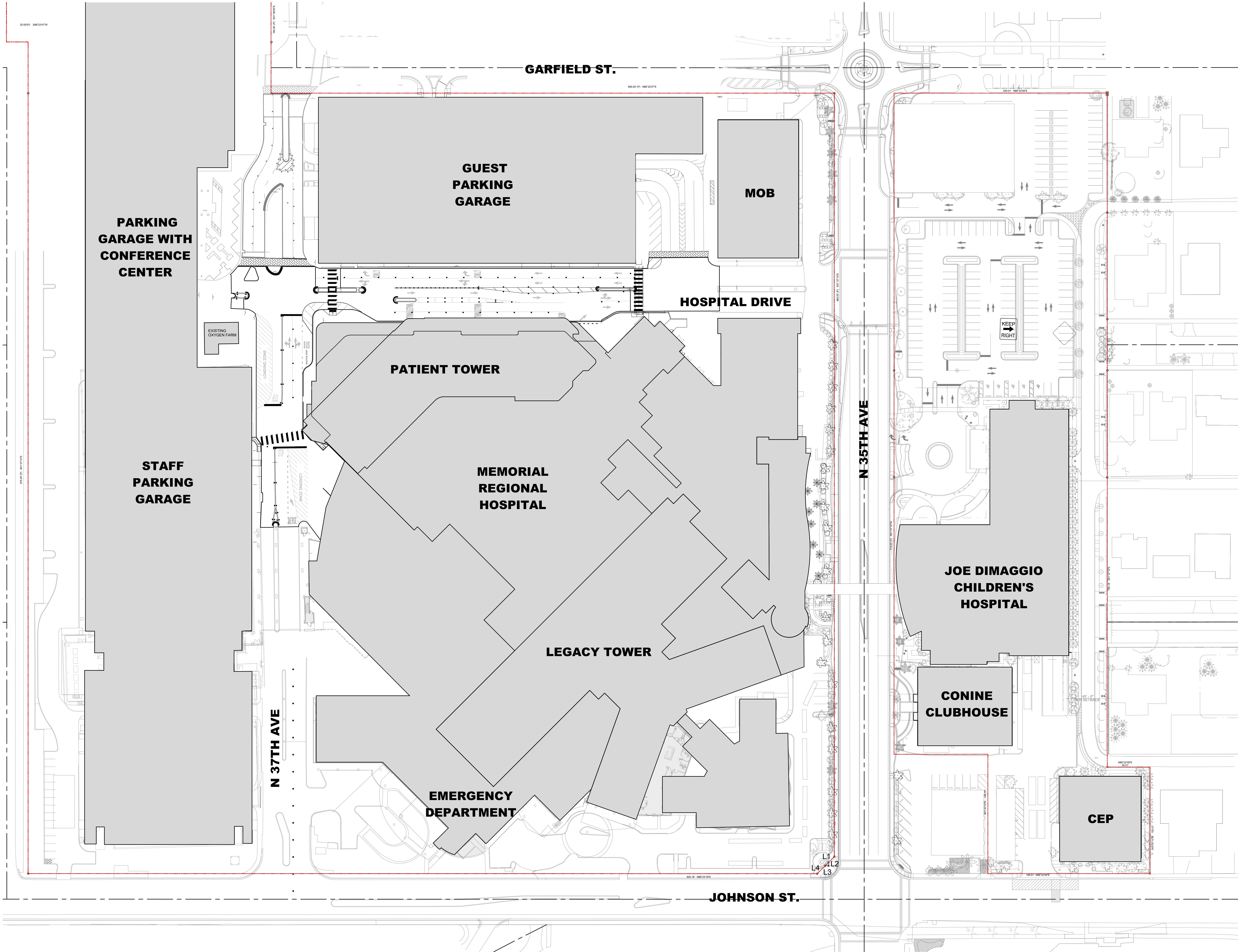
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NORTH NORTH
REVISION
NO. DESCRIPTION DATE

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HKS PROJECT NUMBER
23459.000
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SHEET TITLE
ARCHITECTURAL SITE
PLAN - CIRCULATION
DIAGRAM
SHEET NO.

BUILDING PERMIT NUMBER: 1111

A02-A

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01 MASTER PLAN
1" = 40'-0"

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ORLANDO, FL 32801

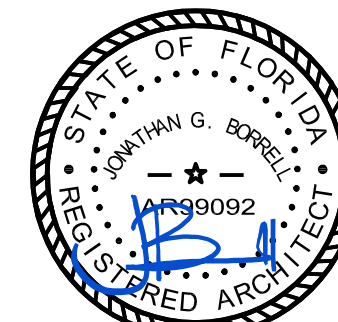
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GNG STRUCTURAL ENGINEERS
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MIAMI LAKES, FL 33016

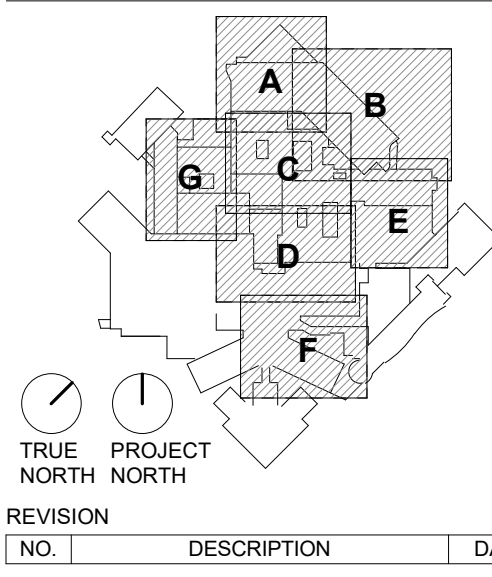
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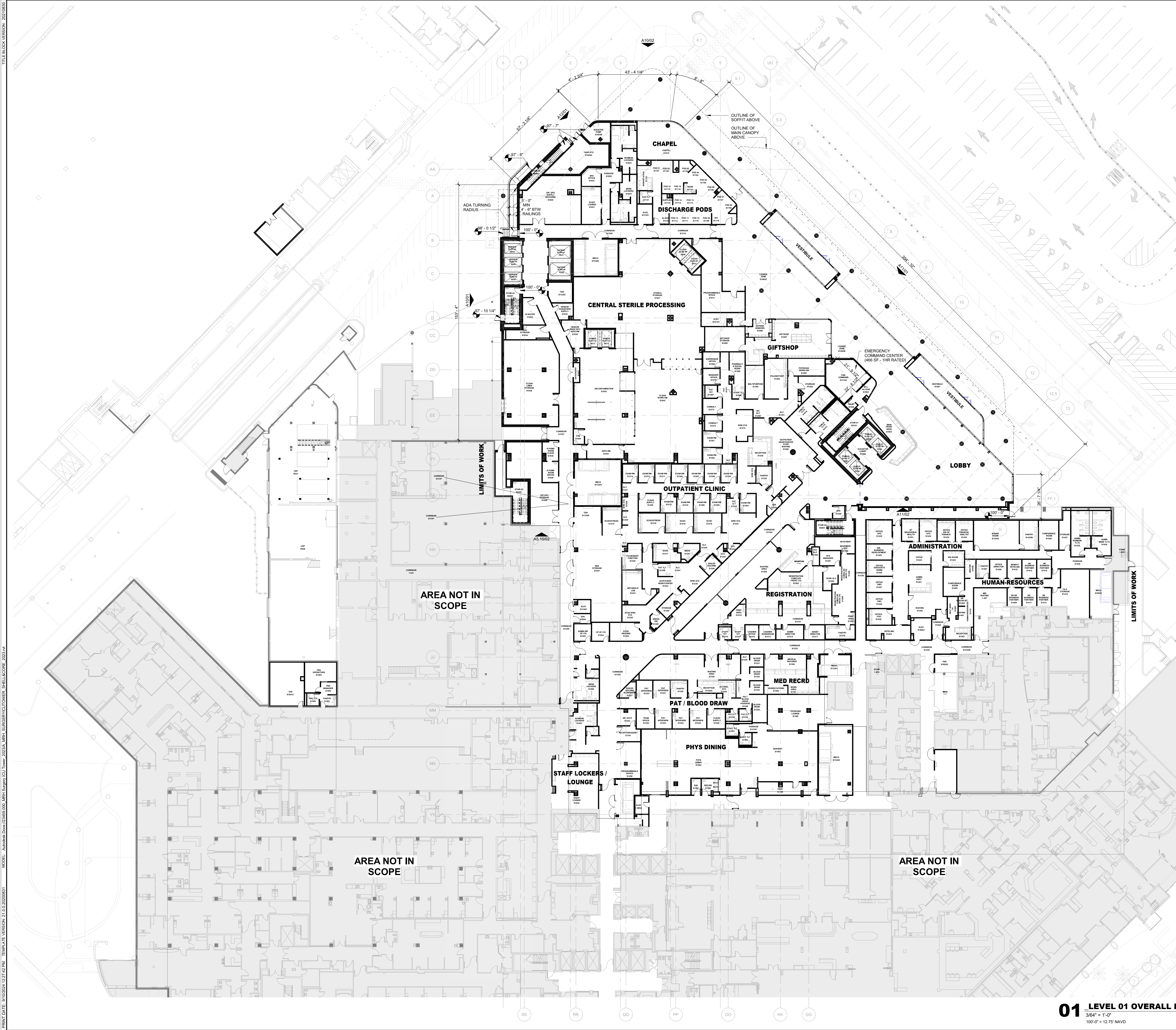
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MASTER PLAN

SHEET NO.
A02-B

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GENERAL NOTES

1. ALL ENCLOSED AREAS ON THE GROUND LEVEL ARE FFE = 12.75' NAVD U.N.O. 12.75' NAVD = 100'-0"

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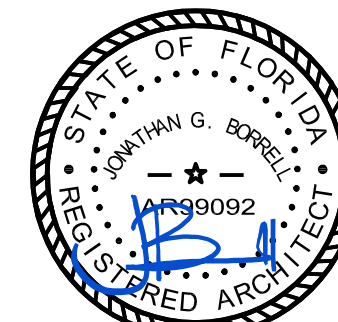
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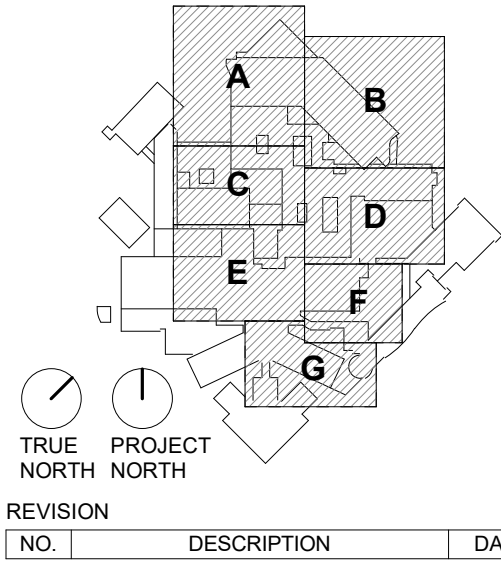
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LEVEL 01 OVERALL FLOOR PLAN

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A03

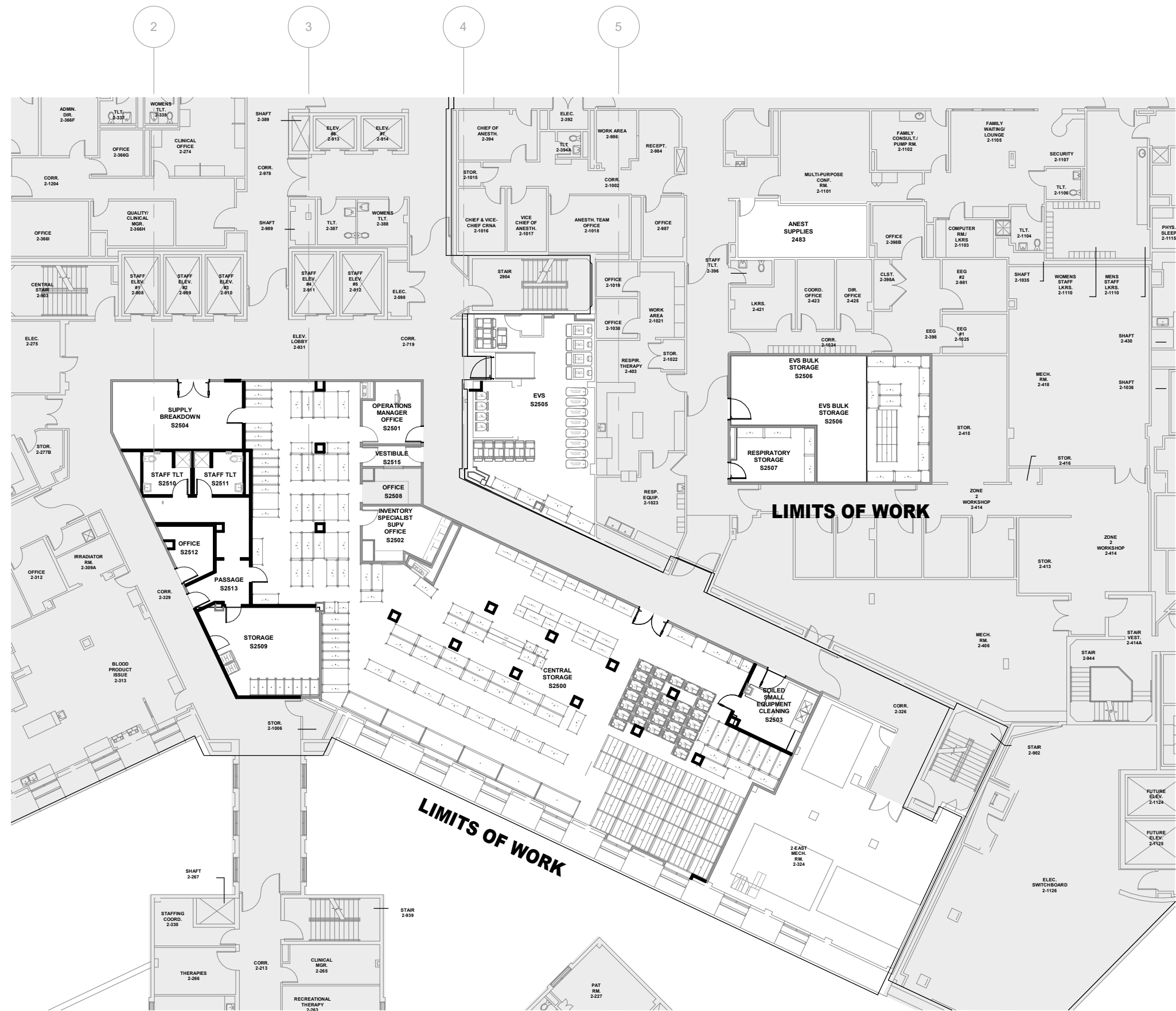
01 LEVEL 01 OVERALL FLOOR PLAN
3/8" = 1'-0"
100'-0" = 12.75' NAVD

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01 LEVEL 02 OVERALL FLOOR PLAN
3/64" = 1'-0"



02 LEVEL 02 OVERALL FLOOR PLAN
3/64" = 1'-0"

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CORAL GABLES, FL 33134

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ORLANDO, FL 32801

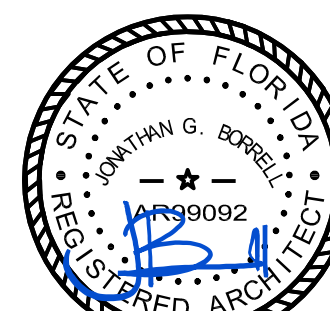
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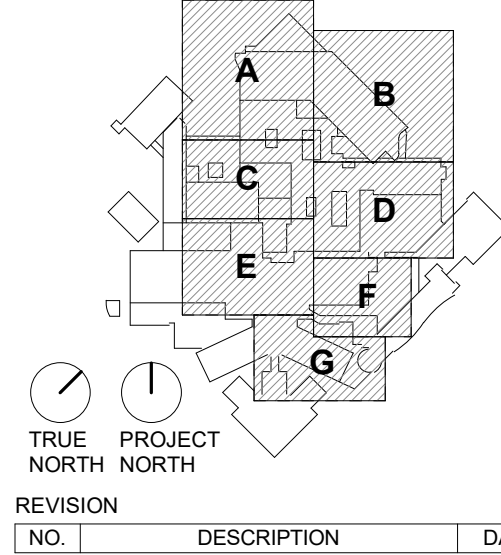
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LEVEL 02 OVERALL
FLOOR PLAN

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A04

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01 LEVEL 03 OVERALL FLOOR PLAN
3/64" = 1'-0"

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CORAL GABLES, FL 33134

INTERIOR DESIGNER
HKS ARCHITECTS
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ORLANDO, FL 32801

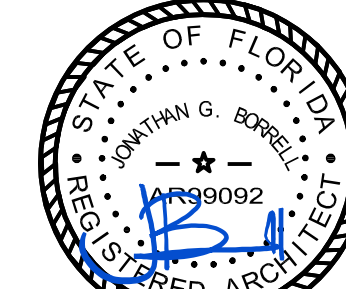
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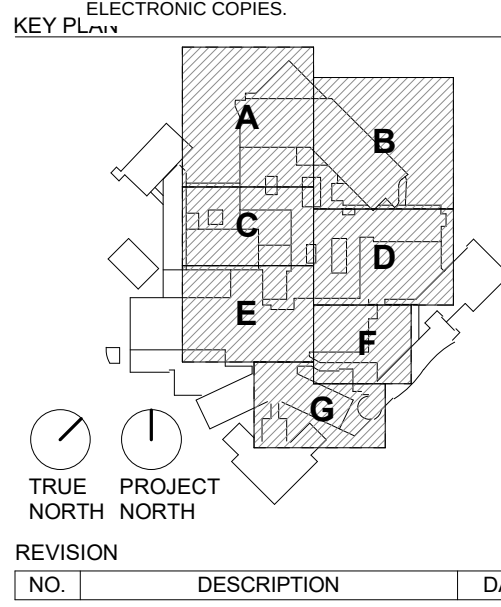
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NASHVILLE, TN 37204

OWNER
MEMORIAL HEALTHCARE SYSTEM
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HOLLYWOOD, FL 33021

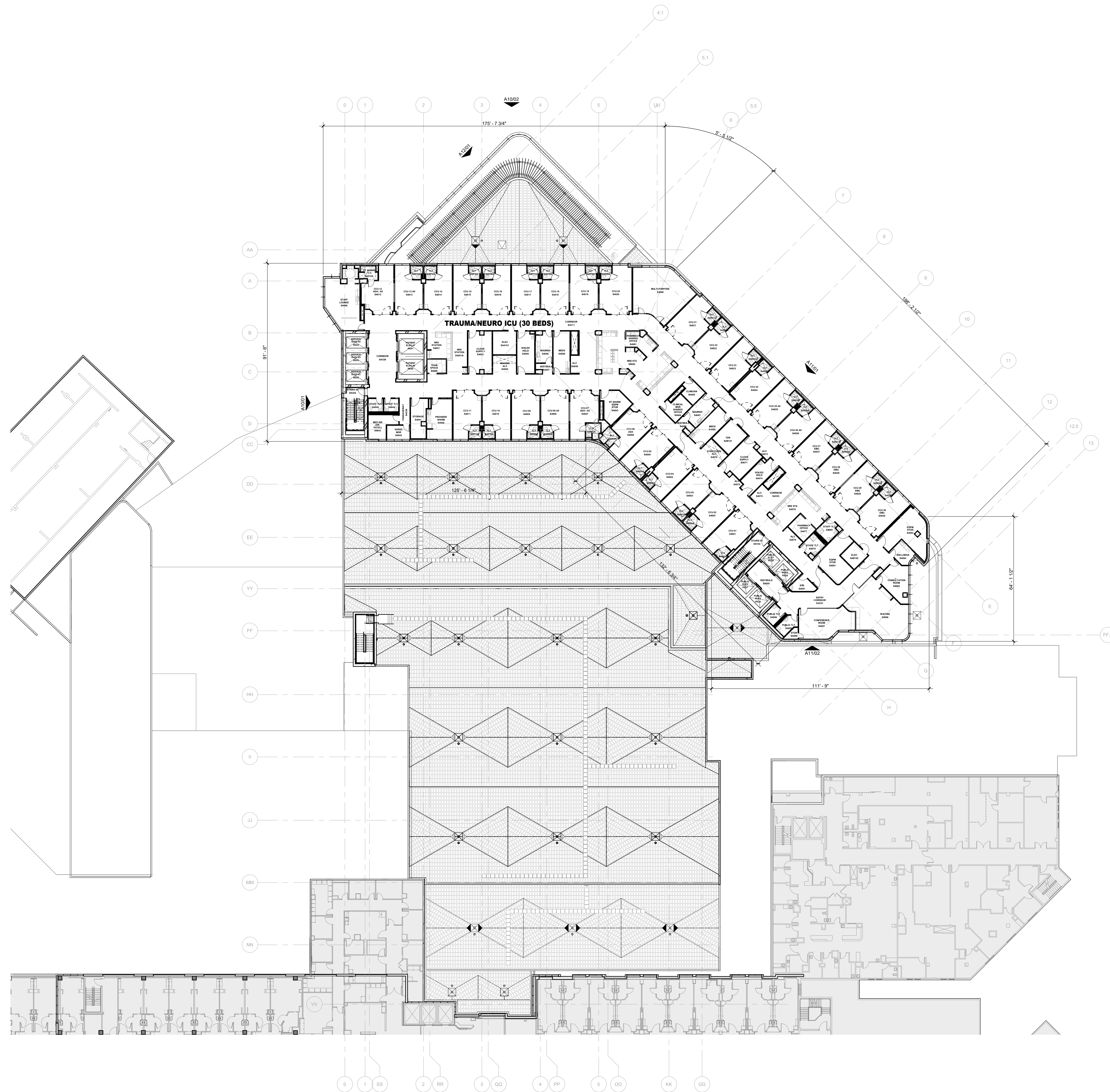


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CONSTRUCTION
SHEET TITLE
LEVEL 03 OVERALL
FLOOR PLAN

SHEET NO.
A05



01 LEVEL 04 OVERALL FLOOR PLAN

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ORLANDO, FL 32801

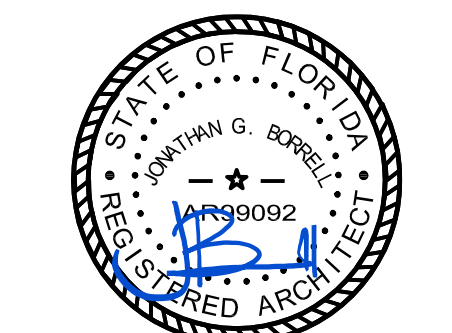
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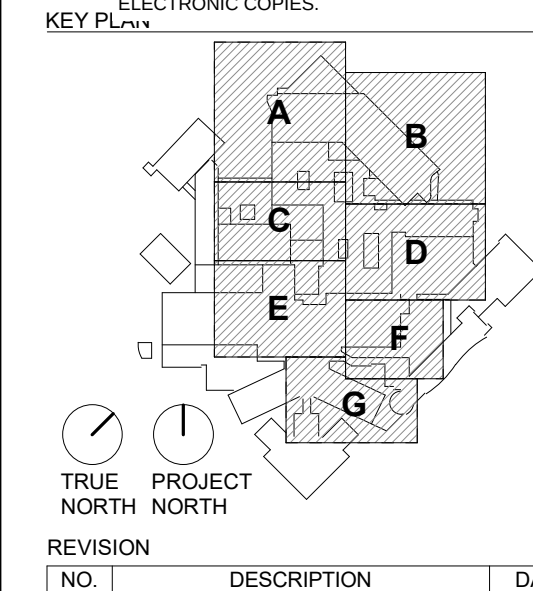
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23459.000

DATE
MARCH 21, 2025

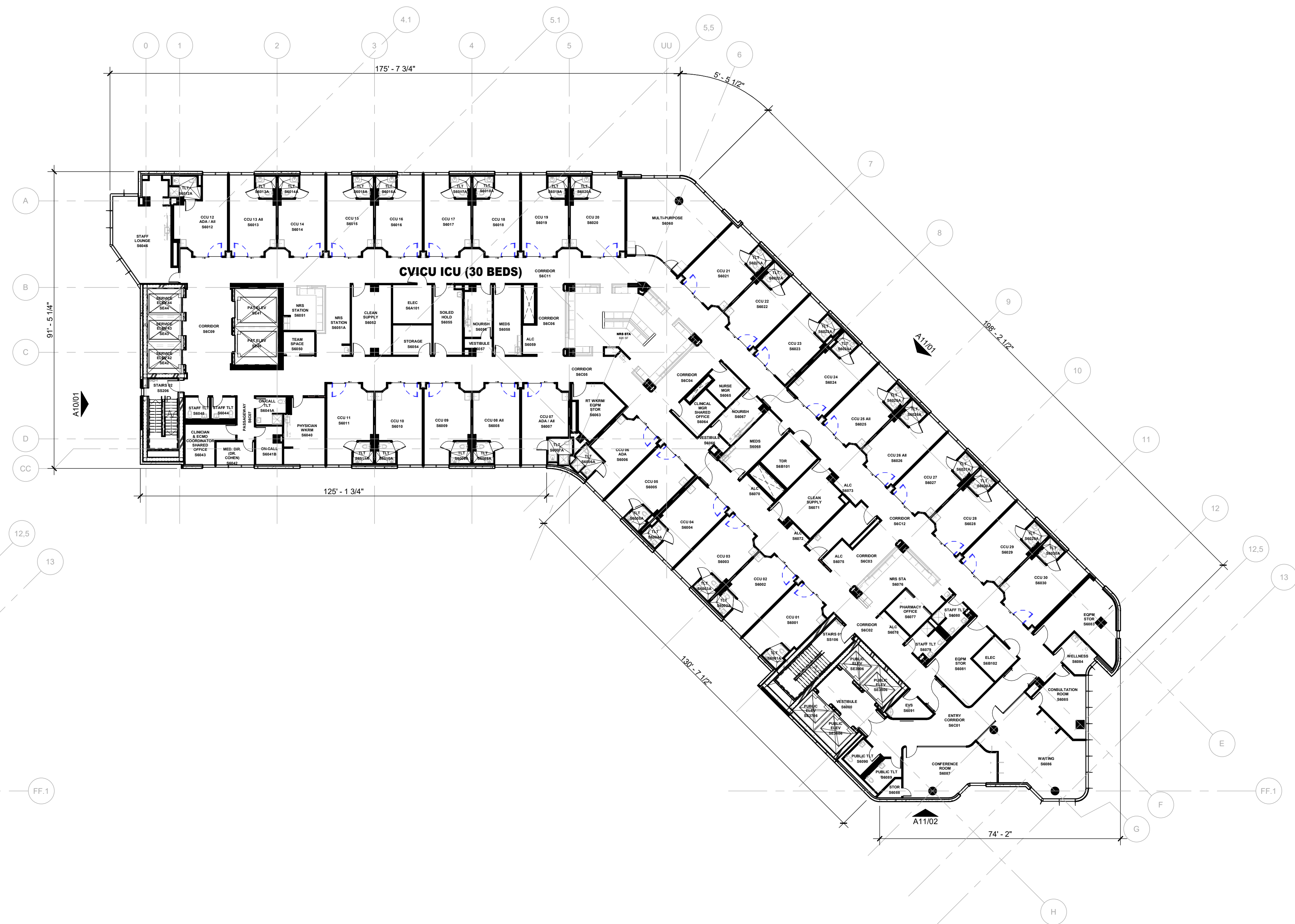
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CONSTRUCTION
SHEET TITLE
LEVEL 04 OVERALL
FLOOR PLAN

SHEET NO.

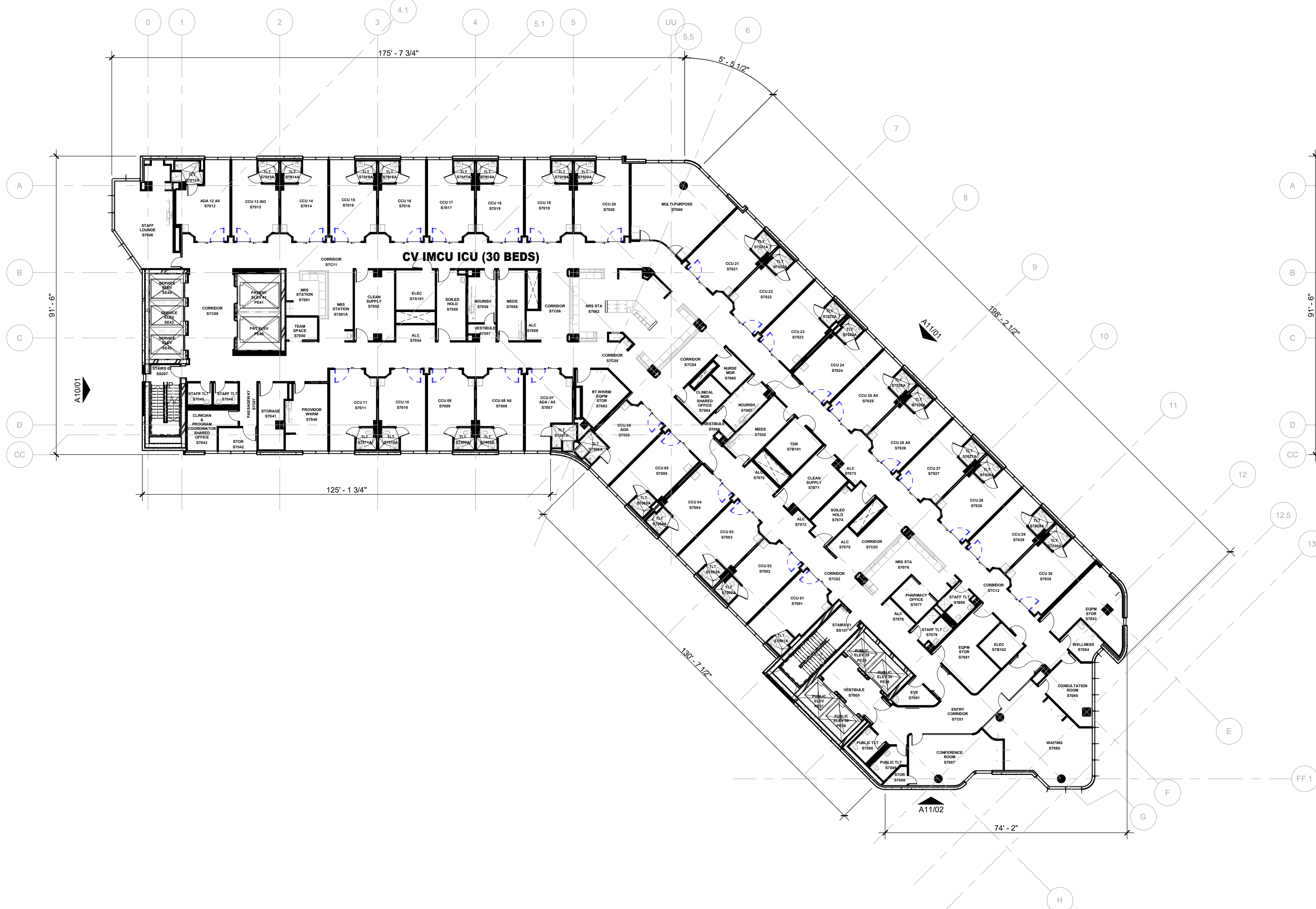
A06



04 LEVEL 08 OVERALL FLOOR PLAN
3/8" = 1'-0"



02 LEVEL 06 OVERALL FLOOR PLAN
3/8" = 1'-0"



03 LEVEL 07 OVERALL FLOOR PLAN
3/8" = 1'-0"



01 LEVEL 05 OVERALL FLOOR PLAN
3/8" = 1'-0"

HKS

ARCHITECT
HKS ARCHITECTS, INC.
2020 SALZEDO STREET, 4TH FLOOR
CORAL GABLES, FL 33134

INTERIOR DESIGNER
HKS ARCHITECTS
225 EAST ROBINSON ST, SUITE #405
ORLANDO, FL 32801

CIVIL & LANDSCAPE
CGA SOLUTIONS
1800 ELLER DRIVE, SUITE 600
FORT LAUDERDALE, FL 33316

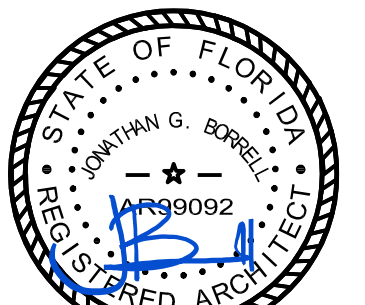
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TLC ENGINEERING SOLUTIONS, INC.
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DEERFIELD BEACH, FL 33441

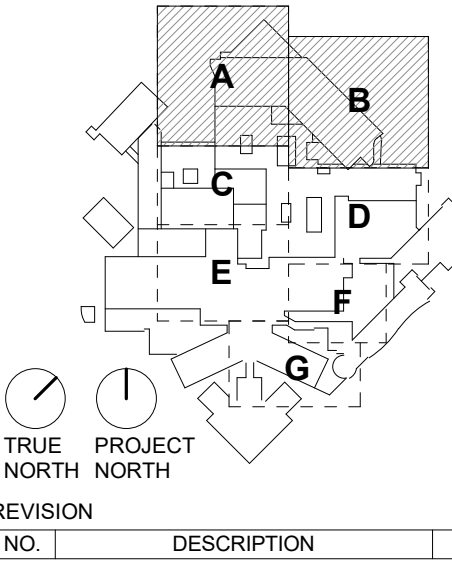
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MEMORIAL HEALTHCARE SYSTEM
3501 JOHNSON STREET
HOLLYWOOD, FL 33021

Memorial
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SURGICAL & CRITICAL CARE TOWER EXPANSION
3501 JOHNSON STREET, HOLLYWOOD, FL 33021

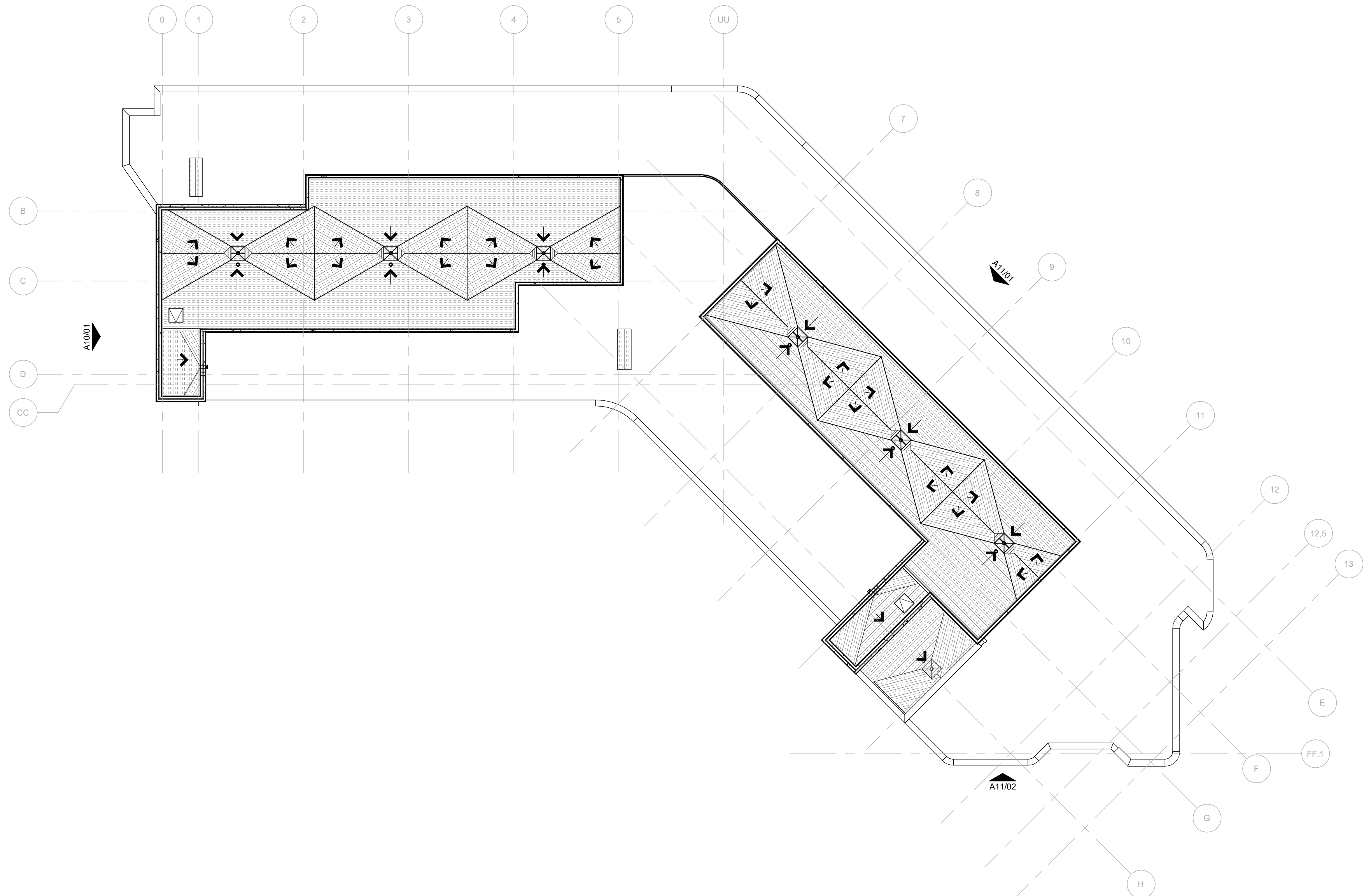


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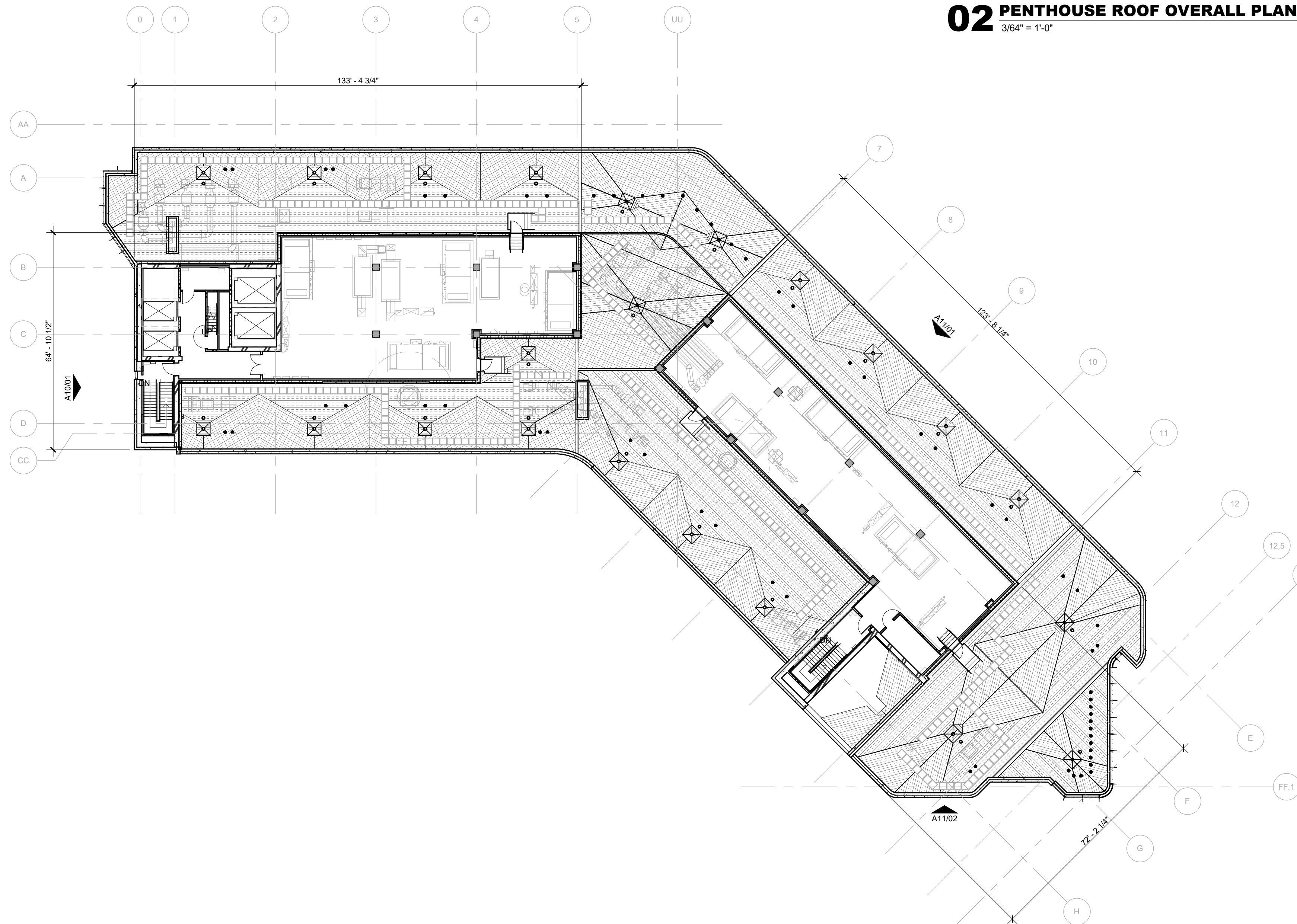


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AHCA PROJECT ID:
15005
HKS PROJECT NUMBER
23459.000
DATE
MARCH 21, 2025
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SHEET TITLE
**LEVEL 05, 06, 07 & 08
OVERALL FLOOR PLAN**

SHEET NO.
A07



02 PENTHOUSE ROOF OVERALL PLAN
3/64" = 1'-0"



01 PENTHOUSE LEVEL & ROOF OVERALL FLOOR PLAN
3/64" = 1'-0"

HKS

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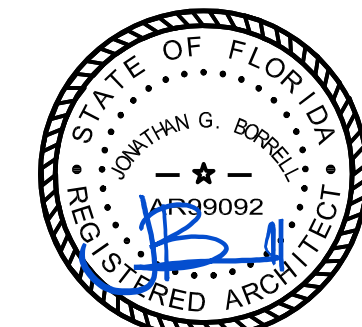
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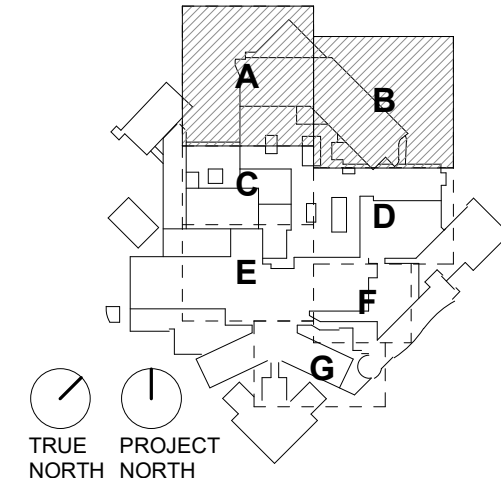
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HOLLYWOOD, FL 33021



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KEY PLAN



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AHCA PROJECT ID:

15005

HKS PROJECT NUMBER

23459.000

DATE

MARCH 21, 2025

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ISSUED FOR

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SHEET TITLE

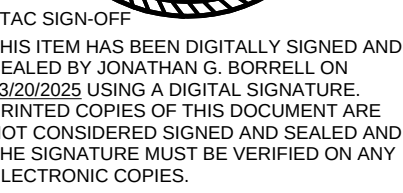
PENTHOUSE & ROOF

OVERALL FLOOR PLAN

SHEET NO.

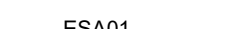
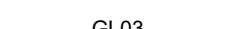
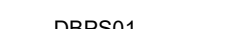
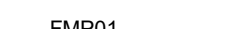
A08

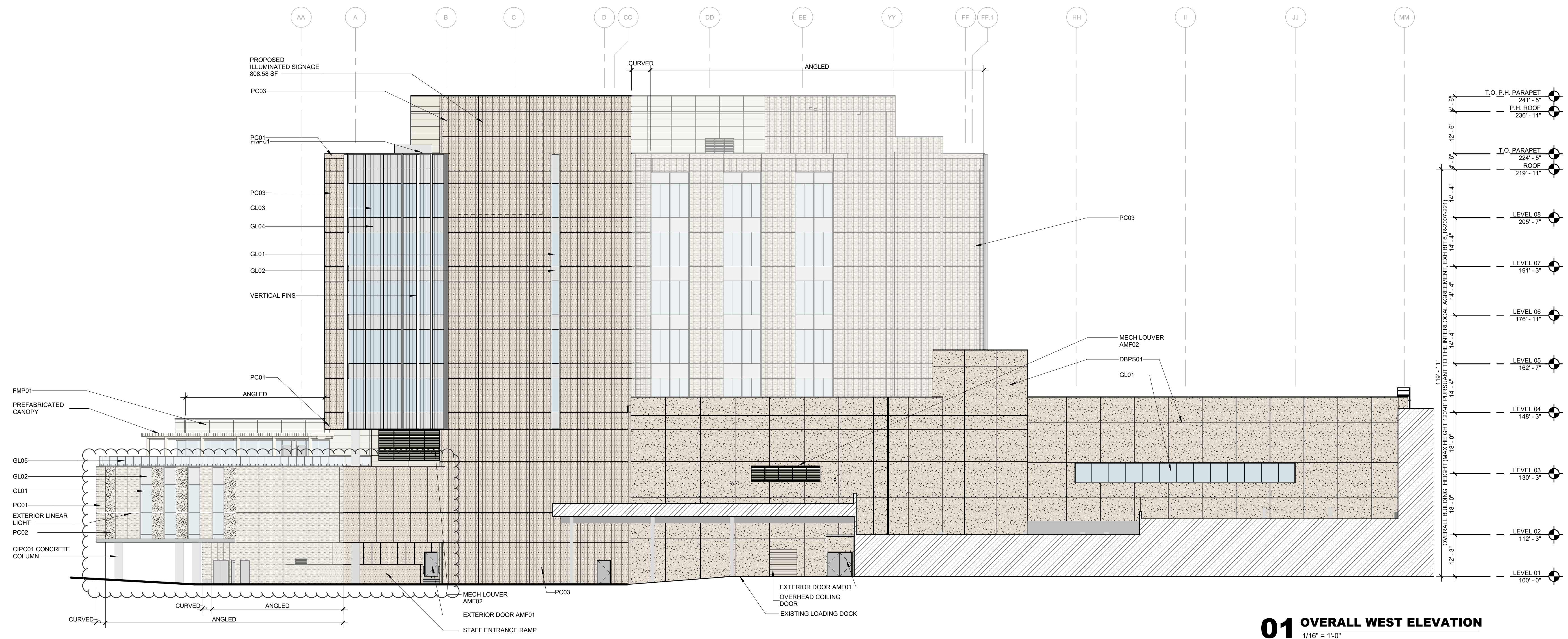
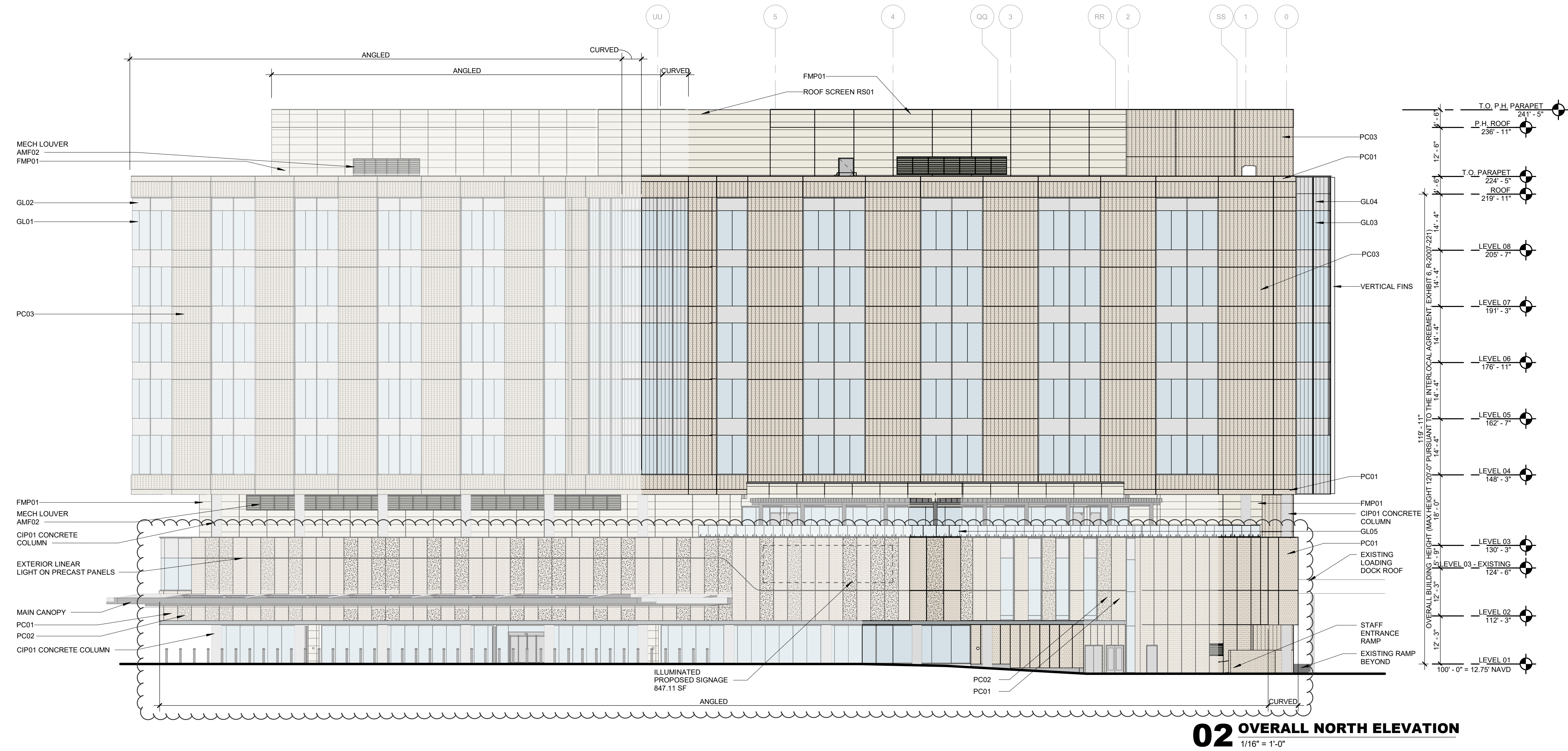
EXTERIOR SELECTIONS									
REVISION	SPECIFICATION	MARK	BASIS OF DESIGN	MODEL/COLOR	PATTERN/TEXTURE	LOCATION	FPA / NOA	FPA / NOA EXP.	COMMENTS
ARCHITECTURAL METAL FINISH (AMF)									
	- GENERAL SELECTIONS	AMF01	PPG DURANAR	DOVE GRAY UC19848	ORGANIC COATING - KYNAR 2 COAT	MULLIONS, ALUMINUM CORNICES, SHADOW BOX, TRIM EDGE AND FRAME DETAIL ON BUILDING FACADE, EXTERIOR DOORS AND DOOR FRAMES (REF ELEVATIONS), PREFABRICATED CANOPY	NA	NA	
	- GENERAL SELECTIONS	AMF02	PPG DURANAR	COLOR TO MATCH PRECAST	ORGANIC COATING - KYNAR 2 COAT	ALUMINUM CORNING, FLASHING, MECH LOWERS	NA	NA	
ARCHITECTURAL PRECAST CONCRETE									
	DIVISION 01	PC01	GATE PRECAST	3682	FLAT PANEL / TEXTURE: LIGHT SAND BLAST	LEVELS 01 AND 02	23-0802.01	09.24.2024	FINISH TEXTURE AND FORMLINER SUBJECT TO MOCKUP AND OWNER REVIEW
	DIVISION 03	PC02	GATE PRECAST	3682	FLAT PANEL / TEXTURE: MEDIUM SAND BLAST	LEVELS 01 AND 02	23-0802.01	09.24.2024	FINISH TEXTURE AND FORMLINER SUBJECT TO MOCKUP AND OWNER REVIEW
	DIVISION 03	PC03	GATE PRECAST	3682	FITZGERALD FORMLINER 14305 FLUTED RUB - 0.5" DEEP, 1.5" ON CENTER	TOWER AND PENTHOUSE	23-0802.01	09.24.2024	FINISH TEXTURE AND FORMLINER SUBJECT TO MOCKUP AND OWNER REVIEW
CAST IN PLACE CONCRETE									
	DIVISION 03	CP01	TBD	COLOR TO MATCH PRECAST	LIGHT SAND BLAST	EXPOSED ROUND COLUMNS AND MAIN CANOPY	NA	NA	TRAFFIC COATING TO BE APPLIED TO SKYWARD FACING SURFACE IF REQUIRED
CEMENT PLASTER SYSTEM									
	DIVISION 07	CP001	STO CORP - STO POWERWALL HI	STO SIGNATURE - IMPRESSION COLOR #10622	STO 10 - SMOOTH LIMESTONE APPEARANCE	REFER TO DRAWINGS	23-0516.03	06.03.2023	
DIRECT BOND PLASTER SYSTEM									
	DIVISION 07	DP001	STO CORP - STO POWERWALL HI	STO SIGNATURE - IMPRESSION COLOR #10622	STO 10 - SMOOTH LIMESTONE APPEARANCE	REFER TO DRAWINGS	23-0516.03	06.03.2023	
EXTERIOR SOFFIT									
	07 420.14 DIVISION 07	ESA01	TAKTL	COLOR TO MATCH PRECAST	SMOOTH FINISH	MAIN ENTRANCE CANOPY	21-0408.05	06.22.2023	SEALER: MICROSEAL
	07 420.1 DIVISION 07	ESA02	LONGBOARD	SAND DRIFT 102634 / 102633	V-GROOVE SOFFIT SYSTEM	LEVEL 01 AND 03	22-0209.01	01.26.2023	
FORMED MTL WALL PANEL									
	DIVISION 07	FMP01	LONGBOARD	CUSTOM COLOR TO MATCH PRECAST	V-GROOVE WALL SYSTEM	LEVEL 01, 03 AND PENTHOUSE	23-0209.01	01.26.2023	CUSTOM COLOR PENDING OWNER APPROVAL, DOWNSIL SILICONE - COLOR: GRAY COPING TO MATCH
ROOFING SYSTEMS									
	DIVISION 07	ERA01	SIPRAST POLY ISO INSULATION		TBD	LEVEL 03, 04, 09, PH ROOF	22-1020.11	06.13.2024	
	DIVISION 07	ERA02	WAUSAU TILE INC.	H-SERIES PERMEABLE / ESTATE HRT30 AND HRT-32		LEVEL 03 TERRACE	FL4816.1	NA	CONCRETE PAVERS, TERRAST-20 PEDESTAL, HIDDEN LOCK-DOWN SYSTEM. PEDESTALS TO BE ADHERED TO SIKKA CORP. SIKKALASTIC ROOFING SYSTEM
EXTERIOR ALUMINUM ENTRANCE DOOR									
	DIVISION 08	EXT01	CRL	SERIES BAL-350 HURRICANE RESISTANT MANUAL SWING DOORS - AMF01		REFER TO DRAWINGS	NA	NA	REFERENCE DRAWINGS FOR DIMENSIONS AND PROJECTIONS
	DIVISION 08	EXT02	TORMAX	TX3020 STORM IMPACT w/ MOTION 2301 - AMF01		REFER TO DRAWINGS	20-0720.06	06.02.2025	REFERENCE DRAWINGS FOR DIMENSIONS AND PROJECTIONS
GLAZED ALUMINUM FRAMING SYSTEMS									
	DIVISION 08	GAFS01	CRAWFORD TRACEY CORPORATION	PRO-TECH 750 - AMF01		REFER TO DRAWINGS	FL29820-R15	NA	GRAY GASKET, GRAY STRUCTURAL SILICONE JOINT, GRAY WEATHER SEAL, 1/2" MILL SPACER WITH GRAY SILICONE SEAL
	DIVISION 08	GAFS02	CRAWFORD TRACEY CORPORATION	PRO-TECH 850 - AMF01		REFER TO DRAWINGS	FL29820-R15	NA	GRAY GASKET, GRAY STRUCTURAL SILICONE JOINT, GRAY WEATHER SEAL, 1/2" MILL SPACER WITH GRAY SILICONE SEAL
	DIVISION 08	GAFS03	CRAWFORD TRACEY CORPORATION	PRO-TECH 4850 (INTERIOR USE ONLY)		INTERIOR VESTIBULE	FL29820-R15	NA	GRAY GASKET, GRAY STRUCTURAL SILICONE JOINT, GRAY WEATHER SEAL, 1/2" MILL SPACER WITH GRAY SILICONE SEAL
GLAZING									
	DIVISION 08	GL01	WITRO	1711H INSULATING - LAMINATED VISION GLASS UNIT	SENTRYGLAS CLEAR	REFER TO DRAWINGS	NA	NA	
	DIVISION 08	GL02	WITRO	1711H INSULATING - LAMINATED SHADOW BOX GLASS UNIT - AMF02	SENTRYGLAS CLEAR	REFER TO DRAWINGS	NA	NA	
	DIVISION 08	GL03	WITRO	1711H INSULATING - LAMINATED VISION GLASS UNIT	GRADUATED WHITE - SENTRYGLAS EXPRESSIONS	PATIENT WAITING, MULTI-PURPOSE, STAFF LOUNGES ON TOWER	NA	NA	
	DIVISION 08	GL04	WITRO	1711H INSULATING - LAMINATED SHADOW BOX GLASS UNIT - AMF02	GRADUATED WHITE - SENTRYGLAS EXPRESSIONS	PATIENT WAITING, MULTI-PURPOSE, STAFF LOUNGES ON TOWER	NA	NA	
	DIVISION 08	GL05	WITRO	1711H INSULATING - LAMINATED VISION GLASS UNIT		RAILINGS	NA	NA	
STEEL DOORS									
	DIVISION 08	S001	STEEL CRAFT	H-SERIES DOUBLE FLUSH OUTSWING COMMERCIAL STEEL DOORS - L-MJ1		REFER TO DRAWINGS	22-0427.02	05.06.2023	
	DIVISION 08	S002	STEEL CRAFT	H-SERIES SINGLE FLUSH OUTSWING COMMERCIAL STEEL DOORS - L-MJ1		REFER TO DRAWINGS	22-0427.01	05.06.2023	
	DIVISION 08	S003	STEEL CRAFT	H-SERIES HYA FL 8800 DOUBLE OUTSWING COMMERCIAL STEEL LOVERED DOORS - L-MJ1		REFER TO DRAWINGS	20-1005.16	11.13.2023	
WALL LOUVERS									
	DIVISION 08	L101	CONSTRUCTION SPECIALTIES, INC.	DC-4174 / COLOR - AMF03		REFER TO DRAWINGS	23-0103.04	03.08.2027	
	DIVISION 08	R001	ARCHITECTURAL LOUVERS	VLFR ALUMINUM LOUVERS - AMF02		PENTHOUSE SCREENWALL	23-0615.26	10.31.2023	
SILICONE ELASTOMERIC COATING									
	DIVISION 9 - 099653	SEC01	DOWSIL ALLOQUARD SILICONE ELASTOMERIC COATING	TO MATCH INTERIOR FIELD PAINT #P71		TANK STORAGE ROOM	NA	NA	

**DBPS01 - 01 DIRECT BOND PLASTER SYSTEM**

REVISION		
NO.	DESCRIPTION	DATE

SHEET NO.

GENERAL NOTES	ABBREVIATIONS	EXTERIOR MATERIALS LEGEND													
1. EXTERIOR ASSEMBLIES ARE TAGGED ON WALL SECTIONS AND RESPECTIVE FINISHES ARE TAGGED ON ELEVATIONS. 2. ALL ENCLOSED AREAS ON THE GROUND LEVEL ARE FFE = 12.75' NAVD U.N.O. 12.75' NAVD = 100'-0" 3. HORIZONTAL REVEALS ARE MEASURED TO THE TOP OF THE REVEAL, U.N.O. 4. VERTICAL REVEALS ARE MEASURED TO THE LEFT OF THE REVEAL, U.N.O.	CJ - CONTROL JOINT RJ - REVEAL JOINT DJ - DEFLECTION JOINT EJ - EXPANSION JOINT PJ - PANEL JOINT	ARCHITECTURAL PRECAST CONCRETE		SOFFIT ASSEMBLIES	GLAZING			ROOFING SYSTEMS		ARCHITECTURAL METAL FINISHES	DIRECT BOND PLASTER SYSTEM	CAST IN PLACE CONCRETE	CEMENT PLASTER SYSTEM	FORMED METAL PANEL	
		- PC01  - PC02  - PC03 	- ESA01  - ESA02 	- GL01  - GL04 	- GL02  - GL05 	- GL03 	- ERA01  - ERA02 	- AMF01  - AMF02 	- DBPS01 	- CIP01 	- CPS01 	- FMP01 			



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CORAL GABLES, FL 33134

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ORLANDO, FL 32801

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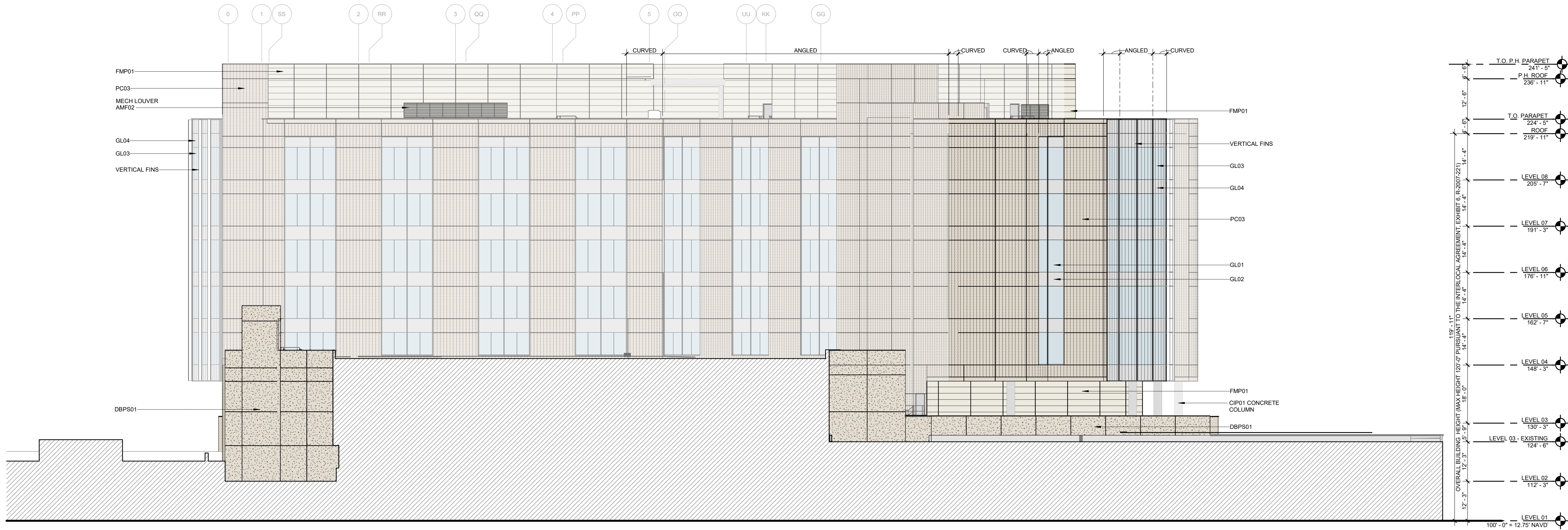
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OVERALL BUILDING ELEVATIONS

SHEET NO.

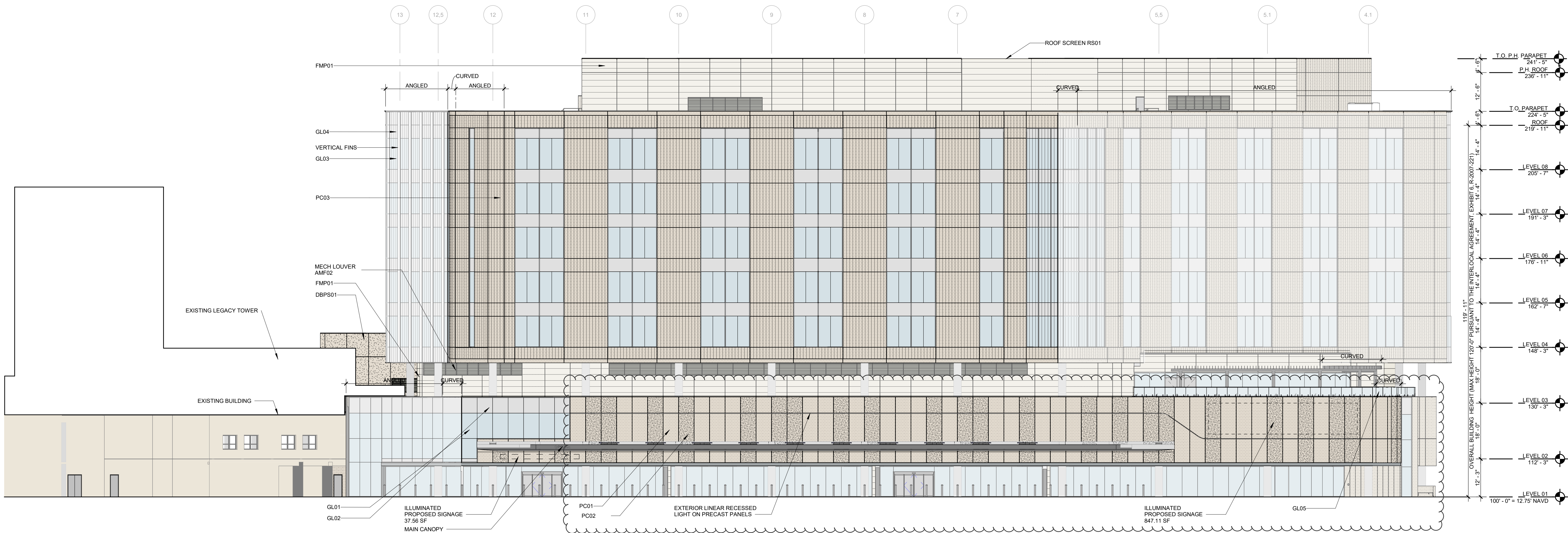
A10

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		- PC01 - PC02 - PC03	- ESA01 - ESA02	- GL01 - GL02 - GL03 - GL04 - GL05	- GL02 - GL03 - GL05	- ERA01 - ERA02	- ERA02	- AMF01 - AMF02	- DBPS01	- CIPC01	- CPS01	- FMP01	



02 OVERALL SOUTH ELEVATION
1/16" = 1'-0"



01 OVERALL NORTHEAST ELEVATION
1/16" = 1'-0"

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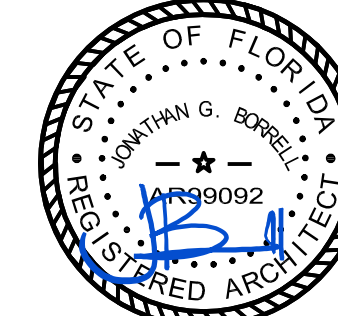
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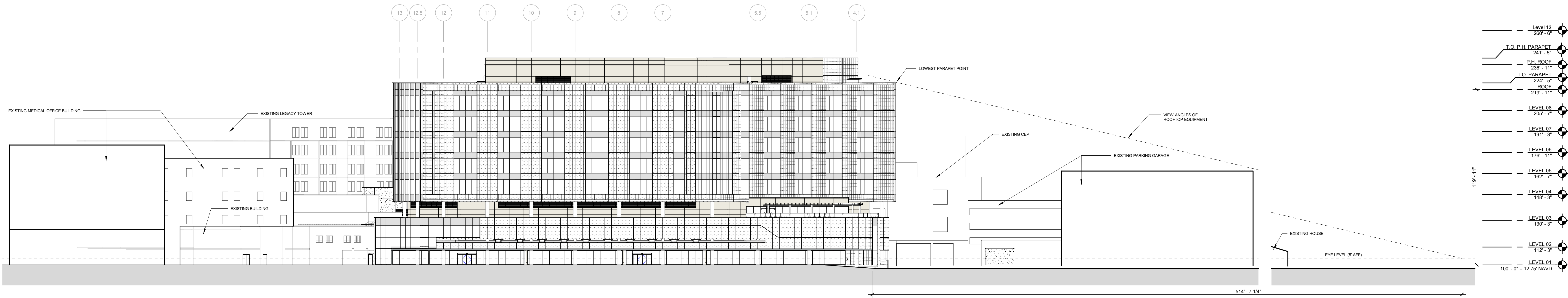


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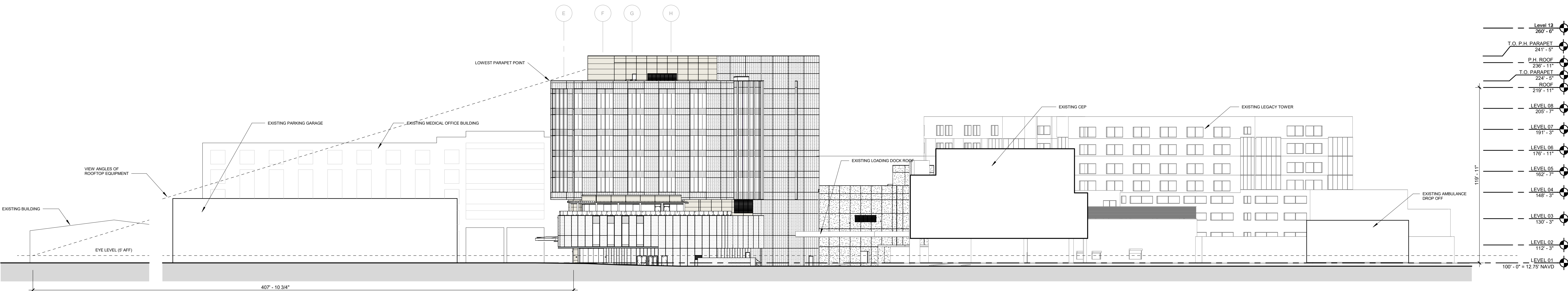
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OVERALL BUILDING ELEVATIONS

SHEET NO.
A11



02 NORTH ELEVATION
1" = 30'-0"



01 WEST ELEVATION
1" = 30'-0"

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STATE OF FLORIDA
JONATHAN G. BORRELL
Professional Engineer
No. 1999092
Exp. 12/31/2025
SEAL

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CONSTRUCTION
SHEET TITLE
ELEVATION SIGHT
LINES

SHEET NO.

A12



APPENDIX B – Turning Movement Count Data



National Data & Surveying Services

Intersection Turning Movement Count

Location: N Park Rd & Johnson St
City: Hollywood
Control: Signalized

Project ID: 23-140477-002
Date: 12/6/2023

Data - Total

NS/EW Streets:	N Park Rd				N Park Rd				Johnson St				Johnson St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
6:00 AM	27	22	7	0	5	14	26	0	11	13	8	0	11	18	4	0	166
6:15 AM	41	19	17	0	5	21	66	0	19	23	15	0	8	40	5	0	279
6:30 AM	61	44	11	0	7	35	69	0	21	47	16	0	11	55	9	0	386
6:45 AM	52	46	18	0	11	34	61	0	32	72	18	0	25	54	12	0	435
7:00 AM	27	78	64	0	13	49	51	0	36	93	14	0	31	77	21	0	554
7:15 AM	33	68	49	0	21	41	62	0	50	109	23	0	46	95	34	0	631
7:30 AM	42	106	54	1	17	59	75	0	56	115	27	0	51	109	30	0	742
7:45 AM	62	121	48	0	34	86	86	0	62	96	20	0	54	117	33	0	819
8:00 AM	42	112	50	0	24	80	73	1	43	142	24	0	41	102	36	0	770
8:15 AM	55	133	42	0	27	95	69	0	48	100	22	0	39	77	34	0	741
8:30 AM	47	113	47	0	15	78	73	0	41	114	37	0	37	82	28	0	712
8:45 AM	32	109	39	0	22	81	51	0	49	105	27	0	29	58	26	0	628
9:00 AM	34	80	38	0	29	94	65	1	29	90	33	0	46	75	35	0	649
9:15 AM	38	82	33	0	17	66	38	0	34	84	18	0	23	63	27	0	523
9:30 AM	37	91	34	1	17	88	36	0	36	72	30	0	36	55	22	0	555
9:45 AM	35	84	24	0	15	76	41	0	32	87	28	0	37	67	23	0	549
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	665	1308	575	2	279	997	942	2	599	1362	360	0	525	1144	379	0	9139
PEAK HR :	26.08%	51.29%	22.55%	0.08%	12.57%	44.91%	42.43%	0.09%	25.81%	58.68%	15.51%	0.00%	25.63%	55.86%	18.51%	0.00%	
PEAK HR VOL :	201	472	194	1	102	320	303	1	209	453	93	0	185	405	133	0	3072
PEAK HR FACTOR :	0.810	0.887	0.898	0.250	0.750	0.842	0.881	0.250	0.843	0.798	0.861	0.000	0.856	0.865	0.924	0.000	0.938
	0.939				0.881				0.903				0.886				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	42	105	58	1	25	112	51	0	47	87	40	0	45	88	34	0	735
4:15 PM	19	116	49	0	32	88	44	1	61	101	39	0	46	87	44	1	728
4:30 PM	23	86	61	0	19	115	41	0	63	126	33	0	43	102	42	0	754
4:45 PM	35	125	55	1	28	121	54	1	61	92	31	0	46	99	39	0	788
5:00 PM	25	119	54	1	21	164	55	0	71	118	38	0	48	95	40	0	849
5:15 PM	26	125	60	0	34	151	54	0	73	89	46	0	55	86	47	0	846
5:30 PM	28	121	52	1	41	127	55	0	69	119	22	0	53	117	37	0	842
5:45 PM	28	140	68	0	27	146	63	0	45	107	34	0	43	97	42	0	840
6:00 PM	29	126	41	0	26	141	49	0	52	109	31	0	67	110	35	1	817
6:15 PM	53	110	59	0	21	108	78	0	41	87	35	0	46	80	24	0	742
6:30 PM	49	106	49	1	25	95	68	0	40	78	23	0	33	90	28	0	685
6:45 PM	24	76	49	0	17	90	34	0	37	91	24	0	56	81	24	0	603
7:00 PM	25	80	64	0	17	70	46	0	45	62	22	0	57	56	24	0	568
7:15 PM	28	72	31	0	16	62	40	0	52	88	42	0	22	62	22	0	537
7:30 PM	19	68	34	0	17	68	25	0	68	78	37	0	33	58	15	0	520
7:45 PM	21	72	31	0	26	53	25	0	48	54	19	0	36	59	18	0	462
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	474	1647	815	5	392	1711	782	2	873	1486	516	0	729	1367	515	2	11316
PEAK HR :	16.12%	56.00%	27.71%	0.17%	13.58%	59.27%	27.09%	0.07%	30.37%	51.69%	17.95%	0.00%	27.90%	52.32%	19.71%	0.08%	
PEAK HR VOL :	107	505	234	2	123	588	227	0	258	433	140	0	199	395	166	0	3377
PEAK HR FACTOR :	0.955	0.902	0.860	0.500	0.750	0.896	0.901	0.000	0.884	0.910	0.761	0.000	0.905	0.844	0.883	0.000	0.994
	0.898				0.977				0.915				0.918				

National Data & Surveying Services

Intersection Turning Movement Count

Location: N 35th Ave & Johnson St
City: Hollywood
Control: Signalized

Project ID: 23-140477-001
Date: 12/6/2023

Data - Total

NS/EW Streets:	N 35th Ave				N 35th Ave				Johnson St				Johnson St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
6:00 AM	22	18	3	0	11	11	5	0	6	19	1	1	5	44	20	0	166
6:15 AM	62	36	9	0	14	6	9	0	11	35	5	0	13	87	42	0	329
6:30 AM	73	65	9	0	29	20	12	0	15	44	6	0	16	105	71	0	465
6:45 AM	55	41	13	0	28	25	14	0	15	86	13	0	18	92	54	0	454
7:00 AM	40	26	17	0	32	14	14	0	15	89	12	0	23	96	36	0	414
7:15 AM	59	43	20	0	55	31	19	0	8	109	10	0	21	101	51	0	527
7:30 AM	68	49	25	0	63	32	18	0	11	107	13	0	27	132	56	0	601
7:45 AM	51	60	32	0	52	30	8	0	9	115	8	0	33	157	86	0	641
8:00 AM	58	59	26	0	59	27	14	0	10	104	13	0	28	113	68	0	579
8:15 AM	52	43	29	0	50	27	12	0	26	112	13	0	27	139	47	0	577
8:30 AM	37	49	26	0	51	30	20	0	20	92	15	0	25	106	69	0	540
8:45 AM	22	50	24	0	54	21	14	0	27	113	12	0	21	85	35	0	478
9:00 AM	22	43	21	0	38	27	13	0	24	99	6	0	27	114	39	0	473
9:15 AM	15	47	11	0	35	22	9	0	15	78	25	0	15	80	43	0	395
9:30 AM	28	34	16	0	49	25	16	0	19	89	15	0	17	85	33	0	426
9:45 AM	17	55	15	0	38	36	29	0	20	81	14	0	22	74	35	0	436
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	681	718	296	0	658	384	226	0	251	1372	181	1	338	1610	785	0	7501
PEAK HR :	40.18%	42.36%	17.46%	0.00%	51.89%	30.28%	17.82%	0.00%	13.91%	76.01%	10.03%	0.06%	12.37%	58.91%	28.72%	0.00%	
PEAK HR VOL :	229	211	112	0	224	116	52	0	56	438	47	0	115	541	257	0	2398
PEAK HR FACTOR :	0.842	0.879	0.875	0.000	0.889	0.906	0.722	0.000	0.538	0.952	0.904	0.000	0.871	0.861	0.747	0.000	0.935
	0.965				0.867				0.896				0.827				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	28	27	29	0	68	58	33	0	14	78	28	0	29	119	31	0	542
4:15 PM	19	21	17	0	80	38	34	0	10	111	24	0	29	116	19	0	518
4:30 PM	19	18	26	0	87	39	38	0	5	97	25	0	32	126	22	0	534
4:45 PM	19	16	30	0	70	36	22	0	18	98	26	0	36	129	32	0	532
5:00 PM	14	16	25	0	86	48	32	0	10	107	30	0	45	103	28	0	544
5:15 PM	19	13	27	0	72	51	25	0	7	104	28	0	38	107	49	0	540
5:30 PM	17	24	31	0	76	38	18	0	7	104	20	0	41	125	31	0	532
5:45 PM	13	25	34	0	60	51	11	0	14	101	28	0	46	114	33	0	530
6:00 PM	23	24	19	0	50	37	17	0	9	113	25	0	26	127	29	0	499
6:15 PM	44	26	19	0	54	21	19	0	16	95	19	0	23	139	43	0	518
6:30 PM	48	31	21	0	52	32	28	0	19	69	13	0	31	138	49	1	532
6:45 PM	16	16	8	0	45	27	15	0	10	92	11	0	27	101	18	0	386
7:00 PM	16	13	22	0	43	22	21	0	5	72	20	0	29	77	21	0	361
7:15 PM	9	14	18	0	65	43	37	0	3	91	42	0	17	92	20	0	451
7:30 PM	9	8	19	0	56	26	10	0	13	110	25	1	16	68	13	0	374
7:45 PM	13	13	10	0	44	15	21	0	5	62	27	0	24	71	16	0	321
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	326	305	355	0	1008	582	381	0	165	1504	391	1	489	1752	454	1	7714
PEAK HR :	33.06%	30.93%	36.00%	0.00%	51.14%	29.53%	19.33%	0.00%	8.01%	72.97%	18.97%	0.05%	18.14%	64.99%	16.84%	0.04%	
PEAK HR VOL :	71	63	108	0	315	174	117	0	40	406	109	0	151	465	131	0	2150
PEAK HR FACTOR :	0.934	0.875	0.900	0.000	0.905	0.853	0.770	0.000	0.556	0.949	0.908	0.000	0.839	0.901	0.668	0.000	0.988
	0.931				0.913				0.944				0.948				

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Park Rd & Garfield St
City: Hollywood
Control: 2-Way Stop(EB/WB)

Project ID: 23-140477-003
Date: 12/6/2023

Data - Total

NS/EW Streets:	N Park Rd				N Park Rd				Garfield St				Garfield St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
6:00 AM	0	38	0	0	1	47	0	1	0	0	0	0	0	0	0	0	87
6:15 AM	0	42	1	0	0	93	0	0	1	0	0	0	0	0	0	0	137
6:30 AM	0	73	1	0	0	107	0	0	0	0	0	0	1	0	0	0	182
6:45 AM	0	91	0	0	0	109	0	0	0	0	0	0	1	0	2	0	203
7:00 AM	0	139	1	0	0	110	0	0	0	0	0	0	1	0	1	0	252
7:15 AM	1	166	0	0	0	122	0	0	1	0	2	0	1	0	2	0	295
7:30 AM	0	186	0	0	0	161	0	0	0	0	1	0	1	0	1	0	350
7:45 AM	0	226	0	0	0	199	0	0	1	0	0	0	1	1	1	0	429
8:00 AM	3	201	2	0	2	192	1	0	1	0	0	0	1	0	5	0	408
8:15 AM	0	207	1	0	0	177	1	0	0	0	0	0	0	0	0	0	386
8:30 AM	0	186	0	0	0	170	0	0	1	0	1	0	0	0	1	0	359
8:45 AM	1	180	0	0	0	167	0	0	1	0	0	0	2	0	0	0	351
9:00 AM	0	143	0	0	1	181	1	0	0	0	0	0	0	0	0	0	326
9:15 AM	0	145	1	0	0	125	1	1	0	0	0	0	0	0	1	0	274
9:30 AM	0	145	1	0	0	129	0	0	1	0	0	0	0	0	1	0	277
9:45 AM	0	128	0	1	1	135	0	0	0	0	0	0	0	0	0	0	265
TOTAL VOLUMES :	NL 5	NT 2296	NR 8	NU 1	SL 5	ST 2224	SR 4	SU 2	EL 7	ET 0	ER 4	EU 0	WL 9	WT 1	WR 15	WU 0	TOTAL 4581
APPROACH %'s :	0.22%	99.39%	0.35%	0.04%	0.22%	99.51%	0.18%	0.09%	63.64%	0.00%	36.36%	0.00%	36.00%	4.00%	60.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	3	820	3	0	2	738	2	0	3	0	1	0	2	1	7	0	1582
PEAK HR FACTOR :	0.250	0.907	0.375	0.000	0.250	0.927	0.500	0.000	0.750	0.000	0.250	0.000	0.500	0.250	0.350	0.000	0.922
	0.914				0.932				0.500				0.417				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	184	2	0	2	170	1	0	2	0	1	0	0	0	1	0	363
4:15 PM	2	209	1	0	0	154	1	1	1	0	2	0	1	0	0	0	372
4:30 PM	0	192	1	0	0	185	2	0	1	0	1	0	0	0	0	0	382
4:45 PM	0	223	0	0	0	180	0	0	1	0	1	0	2	0	1	0	408
5:00 PM	1	234	0	0	1	250	1	0	4	0	1	0	0	0	0	0	492
5:15 PM	1	243	0	0	2	248	3	0	1	0	2	0	0	0	3	0	503
5:30 PM	0	230	2	0	2	219	0	1	0	1	1	0	0	0	0	0	456
5:45 PM	0	218	0	0	0	212	1	0	0	0	1	0	0	0	0	0	432
6:00 PM	1	199	0	3	2	225	0	1	0	0	0	0	0	0	0	0	431
6:15 PM	0	175	0	1	1	193	1	1	1	0	0	0	0	0	2	0	375
6:30 PM	0	166	1	0	1	185	0	1	1	0	1	0	0	0	0	0	356
6:45 PM	0	144	2	0	1	145	0	1	1	0	0	0	1	0	1	0	296
7:00 PM	0	140	3	0	1	124	0	0	1	0	0	0	0	0	1	0	270
7:15 PM	0	148	0	0	0	124	0	0	1	0	0	0	1	0	0	0	274
7:30 PM	0	150	1	0	0	93	0	0	0	0	1	0	1	0	1	0	247
7:45 PM	0	140	0	0	0	103	0	0	0	0	0	0	0	0	2	0	245
TOTAL VOLUMES :	NL 5	NT 2995	NR 13	NU 4	SL 13	ST 2810	SR 10	SU 6	EL 15	ET 1	ER 12	EU 0	WL 6	WT 0	WR 12	WU 0	TOTAL 5902
APPROACH %'s :	0.17%	99.27%	0.43%	0.13%	0.46%	98.98%	0.35%	0.21%	53.57%	3.57%	42.86%	0.00%	33.33%	0.00%	66.67%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	2	925	2	0	5	929	5	1	5	1	5	0	0	0	3	0	1883
PEAK HR FACTOR :	0.500	0.952	0.250	0.000	0.625	0.929	0.417	0.250	0.313	0.250	0.625	0.000	0.000	0.000	0.250	0.000	0.936
	0.952				0.929				0.550				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: N 35th Ave & Garfield St
City: Hollywood
Control: 4-Way Yield

Project ID: 23-140477-004
Date: 12/6/2023

Data - Total

NS/EW Streets:	N 35th Ave				N 35th Ave				Garfield St				Garfield St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
6:00 AM	7	1	0	0	0	13	1	0	1	0	4	0	0	0	0	0	27
6:15 AM	5	4	0	1	0	20	12	0	2	0	2	0	0	0	0	0	46
6:30 AM	15	4	0	3	1	26	33	0	2	0	5	0	1	0	0	0	90
6:45 AM	14	6	0	3	0	27	15	0	3	0	6	0	0	0	0	0	74
7:00 AM	14	8	0	1	0	25	3	0	2	0	7	0	0	0	0	0	60
7:15 AM	11	15	0	4	0	33	8	0	6	0	6	2	0	0	0	0	85
7:30 AM	9	30	0	3	1	47	7	1	9	0	6	0	1	0	0	0	114
7:45 AM	8	32	1	5	0	62	9	1	5	0	5	1	1	0	0	0	130
8:00 AM	19	14	0	5	2	80	6	2	1	0	3	0	5	0	1	0	138
8:15 AM	5	23	2	5	2	56	4	1	1	0	3	0	3	0	0	0	105
8:30 AM	8	13	4	7	2	44	1	0	1	1	11	0	4	1	2	0	99
8:45 AM	5	12	3	6	1	58	5	0	3	0	6	0	4	0	0	0	103
9:00 AM	6	11	1	8	0	36	3	0	5	0	9	0	4	1	1	0	85
9:15 AM	3	19	5	6	1	32	3	0	1	0	6	0	6	0	2	0	84
9:30 AM	6	22	0	5	0	38	5	0	6	1	12	0	3	1	3	0	102
9:45 AM	8	19	2	7	3	39	2	0	9	0	15	0	3	0	1	0	108
TOTAL VOLUMES :	NL 143	NT 233	NR 18	NU 69	SL 13	ST 636	SR 117	SU 5	EL 57	ET 2	ER 106	EU 3	WL 35	WT 3	WR 10	WU 0	TOTAL 1450
APPROACH %'s :	30.89%	50.32%	3.89%	14.90%	1.69%	82.49%	15.18%	0.65%	33.93%	1.19%	63.10%	1.79%	72.92%	6.25%	20.83%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	41	99	3	18	5	245	26	5	16	0	17	1	10	0	1	0	487
PEAK HR FACTOR :	0.539	0.773	0.375	0.900	0.625	0.766	0.722	0.625	0.444	0.000	0.708	0.250	0.500	0.000	0.250	0.000	0.882
	0.875				0.781				0.567				0.458				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	1	29	6	10	0	33	2	1	12	0	24	1	8	1	2	0	130
4:15 PM	2	27	2	5	2	54	1	1	10	0	25	0	7	0	5	1	142
4:30 PM	5	25	1	7	0	48	4	0	20	0	26	0	6	1	5	0	148
4:45 PM	2	25	0	6	1	50	0	0	20	1	22	0	7	0	5	0	139
5:00 PM	8	22	0	1	2	55	2	1	28	0	18	0	9	1	0	0	147
5:15 PM	4	50	0	5	0	45	3	0	18	0	15	0	1	0	1	0	142
5:30 PM	4	30	0	6	0	49	3	0	11	0	19	0	3	0	2	0	127
5:45 PM	2	31	0	3	0	51	5	1	8	0	14	0	0	0	1	0	116
6:00 PM	5	12	0	1	0	43	7	0	6	0	19	0	2	0	1	0	96
6:15 PM	3	12	1	3	1	41	10	2	5	1	12	0	3	0	1	0	95
6:30 PM	4	8	2	4	0	49	11	2	4	0	13	0	3	0	2	0	102
6:45 PM	3	6	0	0	0	34	2	0	3	0	9	0	0	0	0	0	57
7:00 PM	1	10	0	1	0	31	3	0	3	0	6	0	0	0	0	0	55
7:15 PM	0	11	0	2	1	28	1	0	12	0	12	0	0	0	0	0	67
7:30 PM	1	15	0	3	0	19	0	0	9	0	8	0	1	0	0	0	56
7:45 PM	2	6	0	1	0	23	0	0	2	0	4	0	3	0	0	0	41
TOTAL VOLUMES :	NL 47	NT 319	NR 12	NU 58	SL 7	ST 653	SR 54	SU 8	EL 171	ET 2	ER 246	EU 1	WL 53	WT 3	WR 25	WU 1	TOTAL 1660
APPROACH %'s :	10.78%	73.17%	2.75%	13.30%	0.97%	90.44%	7.48%	1.11%	40.71%	0.48%	58.57%	0.24%	64.63%	3.66%	30.49%	1.22%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	19	122	1	19	3	198	9	1	86	1	81	0	23	2	11	0	576
PEAK HR FACTOR :	0.594	0.610	0.250	0.679	0.375	0.900	0.563	0.250	0.768	0.250	0.779	0.000	0.639	0.500	0.550	0.000	0.973
	0.682				0.879				0.913				0.750				

National Data & Surveying Services

Intersection Turning Movement Count

Location: N 35th Ave & Memorial Medical Office Centre Dwy
City: Hollywood
Control: Signalized

Project ID: 23-140477-005
Date: 12/6/2023

Data - Total

NS/EW Streets:	N 35th Ave				N 35th Ave				Memorial Medical Office Centre Dwy				Memorial Medical Office Centre Dwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
6:00 AM	32	8	0	0	0	16	2	0	1	0	9	0	0	0	0	0	68
6:15 AM	77	9	0	0	0	15	8	0	2	0	16	0	0	0	0	0	127
6:30 AM	121	23	0	0	0	29	3	0	1	0	24	0	0	0	0	0	201
6:45 AM	74	20	0	0	0	29	8	0	3	0	28	0	0	0	0	0	162
7:00 AM	46	20	0	0	0	27	7	0	3	0	31	0	0	0	0	0	134
7:15 AM	62	32	0	0	0	36	5	0	3	0	74	0	0	0	0	0	212
7:30 AM	62	43	0	0	0	44	8	0	2	0	52	0	0	0	0	0	211
7:45 AM	94	46	0	0	0	65	7	0	4	0	28	0	0	0	0	0	244
8:00 AM	89	44	0	0	0	70	16	0	5	0	32	0	0	0	0	0	256
8:15 AM	69	37	0	0	0	55	13	0	9	0	30	0	0	0	0	0	213
8:30 AM	85	36	0	0	0	60	6	0	4	0	42	0	0	0	0	0	233
8:45 AM	79	33	0	0	0	66	11	0	2	0	26	1	0	0	0	0	218
9:00 AM	68	28	0	1	0	47	11	0	5	0	24	0	0	0	0	0	184
9:15 AM	64	33	0	0	0	40	7	2	9	0	27	0	0	0	0	0	182
9:30 AM	52	26	0	0	0	47	14	0	14	0	42	0	0	0	0	0	195
9:45 AM	65	35	0	0	0	52	11	0	9	0	43	0	0	0	0	0	215
TOTAL VOLUMES :	NL 1139	NT 473	NR 0	NU 1	SL 0	ST 698	SR 137	SU 2	EL 76	ET 0	ER 528	EU 1	WL 0	WT 0	WR 0	WU 0	TOTAL 3055
APPROACH %'s :	70.61%	29.32%	0.00%	0.06%	0.00%	83.39%	16.37%	0.24%	12.56%	0.00%	87.27%	0.17%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	337	163	0	0	0	250	42	0	22	0	132	0	0	0	0	0	946
PEAK HR FACTOR :	0.896	0.886	0.000	0.000	0.000	0.893	0.656	0.000	0.611	0.000	0.786	0.000	0.000	0.000	0.000	0.000	0.924
	0.893				0.849				0.837								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	40	35	0	0	0	65	9	0	13	0	79	1	0	0	0	0	242
4:15 PM	23	25	0	0	0	79	7	0	9	0	65	0	0	0	0	0	208
4:30 PM	22	26	0	0	0	85	6	0	13	0	70	1	0	0	0	0	223
4:45 PM	34	22	0	0	0	69	13	0	10	0	61	0	0	0	0	0	209
5:00 PM	31	25	0	0	0	81	6	0	13	0	82	0	0	0	0	0	238
5:15 PM	24	40	0	0	0	61	4	0	13	0	72	0	0	0	0	0	214
5:30 PM	34	30	0	0	0	71	4	0	12	0	56	1	0	0	0	0	208
5:45 PM	40	23	0	0	0	59	9	0	12	0	50	1	0	0	0	0	194
6:00 PM	45	13	0	1	0	62	10	1	7	0	38	0	0	0	0	0	177
6:15 PM	56	20	0	0	0	56	2	0	0	0	38	0	0	0	0	0	172
6:30 PM	81	21	0	0	0	57	8	0	2	0	44	1	0	0	0	0	214
6:45 PM	34	5	0	0	0	46	1	0	4	0	33	0	0	0	0	0	123
7:00 PM	20	11	0	0	0	31	5	0	2	0	52	1	0	0	0	0	122
7:15 PM	20	10	0	0	0	37	4	0	4	0	95	0	0	0	0	0	170
7:30 PM	21	10	0	0	0	25	6	0	8	0	62	0	0	0	0	0	132
7:45 PM	21	8	0	1	0	29	1	1	3	0	40	0	0	0	0	0	104
TOTAL VOLUMES :	NL 546	NT 324	NR 0	NU 2	SL 0	ST 913	SR 95	SU 2	EL 125	ET 0	ER 937	EU 6	WL 0	WT 0	WR 0	WU 0	TOTAL 2950
APPROACH %'s :	62.61%	37.16%	0.00%	0.23%	0.00%	90.40%	9.41%	0.20%	11.70%	0.00%	87.73%	0.56%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	111	113	0	0	0	296	29	0	49	0	285	1	0	0	0	0	884
PEAK HR FACTOR :	0.816	0.706	0.000	0.000	0.000	0.871	0.558	0.000	0.942	0.000	0.869	0.250	0.000	0.000	0.000	0.000	0.929
	0.875				0.893				0.882								

Location: Adult Emergency Dwy & Johnson St
City: Hollywood
Control: 1-Wat Stop(SB)

Project ID: 23-140475-002
Date: 12/6/2023

NS/ EW Streets:	Adult Emergency Dwy				Adult Emergency Dwy				Johnson St				Johnson St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
6:00 AM	0	0	0	0	2	0	8	0	25	23	0	0	0	53	19	0	130
6:15 AM	0	0	0	0	2	0	6	0	44	49	0	0	0	123	31	0	255
6:30 AM	0	0	0	0	5	0	12	0	69	55	0	3	0	159	38	0	341
6:45 AM	0	0	0	0	5	0	9	0	44	101	0	0	0	125	32	0	316
7:00 AM	0	0	0	0	10	0	11	0	28	110	0	0	0	124	30	1	314
7:15 AM	0	0	0	0	6	0	21	1	36	104	0	0	0	146	20	0	334
7:30 AM	0	0	0	0	4	0	17	0	28	126	0	0	0	210	34	0	419
7:45 AM	0	0	0	0	6	0	9	0	23	127	0	0	0	182	36	0	383
8:00 AM	0	0	0	0	3	0	12	0	42	120	0	0	0	161	26	0	364
8:15 AM	0	0	0	0	3	0	2	0	31	141	0	0	0	165	31	0	373
8:30 AM	0	0	0	0	9	0	9	0	21	133	0	0	0	145	26	0	343
8:45 AM	0	0	0	0	5	0	7	0	26	128	0	0	0	108	21	0	295
9:00 AM	0	0	0	0	4	0	6	2	14	118	0	0	0	130	20	0	294
9:15 AM	0	0	0	0	7	0	12	0	15	109	0	0	0	95	10	0	248
9:30 AM	0	0	0	0	6	0	6	0	17	106	0	0	0	103	21	0	259
9:45 AM	0	0	0	0	6	0	8	0	25	110	0	0	0	112	17	0	278
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	83	0	155	3	488	1660	0	3	0	2141	412	1	4946
PEAK HR :	07:30 AM - 08:30 AM				34.44%	0.00%	64.32%	1.24%	22.69%	77.17%	0.00%	0.14%	0.00%	83.83%	16.13%	0.04%	
PEAK HR VOL :	0	0	0	0	16	0	40	0	124	514	0	0	0	718	127	0	1539
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.667	0.000	0.588	0.000	0.738	0.911	0.000	0.000	0.000	0.855	0.882	0.000	0.918
					0.667				0.927				0.866				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	0	0	0	12	0	27	0	12	107	0	0	0	171	17	1	347
4:15 PM	0	0	0	0	9	0	25	0	18	132	0	0	0	167	6	1	357
4:30 PM	0	0	0	0	14	0	27	0	17	112	0	0	0	176	15	0	361
4:45 PM	0	0	0	0	10	0	29	0	13	123	0	0	0	152	15	0	342
5:00 PM	0	0	0	0	12	0	32	0	13	127	0	0	0	132	14	0	330
5:15 PM	0	0	0	0	18	0	22	2	17	115	0	0	0	145	10	0	329
5:30 PM	0	0	0	0	12	0	33	1	13	121	0	0	0	139	13	1	333
5:45 PM	0	0	0	0	9	0	19	1	13	126	0	0	0	147	7	0	322
6:00 PM	0	0	0	0	6	0	15	0	19	119	0	0	0	154	14	0	327
6:15 PM	0	0	0	0	7	0	13	0	18	110	0	0	0	180	22	0	350
6:30 PM	0	0	0	0	6	0	20	1	32	96	0	1	0	179	34	0	369
6:45 PM	0	0	0	0	8	0	16	1	25	102	0	2	0	116	16	0	286
7:00 PM	0	0	0	0	11	0	15	0	23	86	0	0	0	96	20	0	251
7:15 PM	0	0	0	0	29	0	38	0	10	128	0	0	0	120	17	0	342
7:30 PM	0	0	0	0	18	0	21	0	8	119	0	0	0	83	11	1	261
7:45 PM	0	0	0	0	14	0	12	0	9	67	0	0	0	97	10	0	209
TOTAL VOLUMES : APPROACH %s :	NL 0	NT 0	NR 0	NU 0	SL 195	ST 0	SR 364	SU 6	EL 260	ET 1790	ER 0	EU 3	WL 0	WT 2254	WR 241	WU 3	TOTAL 5116
					34.51%	0.00%	64.42%	1.06%	12.66%	87.19%	0.00%	0.15%	0.00%	90.23%	9.65%	0.12%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	45	0	108	0	60	474	0	0	0	666	53	1	1407
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.804	0.000	0.931	0.000	0.833	0.898	0.000	0.000	0.000	0.946	0.779	0.250	0.974

National Data & Surveying Services

Intersection Turning Movement Count

Location: Employee Parking Dwy W & Johnson St
City: Hollywood
Control: 2-Way Stop(NB/SB)

Project ID: 23-140475-001
Date: 12/6/2023

Data - Total

NS/EW Streets:	Employee Parking Dwy W				Employee Parking Dwy W				Johnson St				Johnson St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
6:00 AM	0	0	2	0	0	0	6	0	42	47	2	0	2	25	34	0	160
6:15 AM	0	0	0	0	0	0	9	0	91	95	0	0	0	38	87	0	320
6:30 AM	0	0	0	0	0	0	12	0	104	127	2	0	0	54	123	0	422
6:45 AM	0	0	0	0	1	0	4	0	91	140	0	0	0	63	69	0	368
7:00 AM	0	0	2	0	0	0	31	0	77	140	3	0	1	93	43	0	390
7:15 AM	0	0	0	0	0	0	130	0	63	136	4	0	2	117	42	0	494
7:30 AM	0	0	1	0	0	0	95	0	68	154	4	0	2	156	73	0	553
7:45 AM	0	0	2	0	0	0	53	0	76	146	3	0	4	131	57	0	472
8:00 AM	0	0	0	0	0	0	24	0	67	157	13	0	1	119	51	0	432
8:15 AM	0	0	5	0	0	0	17	0	56	168	13	0	3	112	54	0	428
8:30 AM	0	0	5	0	0	0	17	0	43	147	9	0	9	107	35	0	372
8:45 AM	0	0	9	0	0	0	10	0	31	150	10	0	4	98	16	0	328
9:00 AM	4	0	5	0	2	0	8	0	10	124	7	1	6	115	15	0	297
9:15 AM	1	0	11	0	3	0	8	0	10	113	10	0	5	89	13	0	263
9:30 AM	3	0	3	0	0	0	6	0	14	119	10	0	8	85	14	0	262
9:45 AM	3	0	4	0	6	0	5	0	7	125	6	0	8	98	13	0	275
TOTAL VOLUMES :	NL 11	NT 0	NR 49	NU 0	SL 12	ST 0	SR 435	SU 0	EL 850	ET 2088	ER 96	EU 1	WL 55	WT 1500	WR 739	WU 0	TOTAL 5836
APPROACH %'s :	18.33%	0.00%	81.67%	0.00%	2.68%	0.00%	97.32%	0.00%	28.01%	68.80%	3.16%	0.03%	2.40%	65.39%	32.21%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	3	0	0	0	302	0	274	593	24	0	9	523	223	0	1951
PEAK HR FACTOR :	0.000	0.000	0.375	0.000	0.000	0.000	0.581	0.000	0.901	0.944	0.462	0.000	0.563	0.838	0.764	0.000	0.882
	0.375				0.581				0.940				0.817				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	2	0	12	0	14	0	60	0	1	96	9	0	5	191	1	0	391
4:15 PM	0	0	12	0	1	0	77	0	1	134	5	0	0	188	5	0	423
4:30 PM	1	0	13	0	0	0	88	0	1	115	1	0	4	195	2	0	420
4:45 PM	0	0	12	0	0	0	105	0	5	124	0	0	2	177	4	0	429
5:00 PM	0	0	22	0	0	0	135	0	1	116	1	0	1	156	1	0	433
5:15 PM	1	0	9	0	0	0	133	0	1	120	3	0	0	168	3	1	439
5:30 PM	0	0	8	0	0	0	94	0	8	124	1	0	1	162	2	0	400
5:45 PM	0	0	13	0	0	0	57	0	12	126	1	0	0	164	8	0	381
6:00 PM	0	0	4	0	0	0	50	0	16	139	0	0	0	156	12	0	377
6:15 PM	0	0	1	0	0	0	34	0	53	129	1	0	2	148	43	0	411
6:30 PM	0	0	2	0	0	0	37	0	65	129	0	0	0	147	51	0	431
6:45 PM	0	0	6	0	1	0	26	0	21	125	0	0	0	126	11	0	316
7:00 PM	0	0	2	0	3	0	48	0	0	101	0	0	0	105	5	0	264
7:15 PM	0	0	2	0	38	2	78	0	1	98	1	0	2	159	0	0	381
7:30 PM	1	0	5	0	34	0	100	0	0	88	1	0	0	102	2	0	333
7:45 PM	0	0	0	0	16	0	44	0	4	60	0	0	0	106	1	0	231
TOTAL VOLUMES :	NL 5	NT 0	NR 123	NU 0	SL 107	ST 2	SR 1166	SU 0	EL 190	ET 1824	ER 24	EU 0	WL 17	WT 2450	WR 151	WU 1	TOTAL 6060
APPROACH %'s :	3.91%	0.00%	96.09%	0.00%	8.39%	0.16%	91.45%	0.00%	9.32%	89.50%	1.18%	0.00%	0.65%	93.55%	5.77%	0.04%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	2	0	56	0	0	0	461	0	8	475	5	0	7	696	10	1	1721
PEAK HR FACTOR :	0.500	0.000	0.636	0.000	0.000	0.000	0.854	0.000	0.400	0.958	0.417	0.000	0.438	0.892	0.625	0.250	0.980
	0.659				0.854				0.946				0.888				

National Data & Surveying Services

Intersection Turning Movement Count

Location: N 46th Ave & Johnson St
City: Hollywood
Control: Signalized

Project ID: 25-140150-001
Date: 4/16/2025

Data - Total

NS/EW Streets:	N 46th Ave				N 46th Ave				Johnson St				Johnson St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
6:00 AM	0	12	21	0	11	7	0	0	1	43	1	0	8	13	3	0	120
6:15 AM	2	18	89	0	20	13	3	0	3	70	1	0	7	20	5	0	251
6:30 AM	0	25	78	0	17	16	1	1	5	81	5	0	19	28	5	0	281
6:45 AM	0	45	58	0	17	28	4	0	5	99	4	0	9	40	5	0	314
7:00 AM	6	48	32	0	25	32	8	0	9	90	4	0	19	54	7	0	334
7:15 AM	5	78	45	0	30	72	17	0	17	77	5	0	64	101	17	0	528
7:30 AM	20	109	54	0	36	97	23	0	24	93	9	0	51	82	23	0	621
7:45 AM	15	141	33	0	54	121	30	1	34	94	10	0	41	85	19	0	678
8:00 AM	8	88	38	0	39	88	17	0	24	97	8	0	22	66	19	0	514
8:15 AM	10	69	39	0	35	75	11	0	9	123	11	0	19	63	11	0	475
8:30 AM	3	72	35	0	20	44	4	0	13	107	8	0	17	69	10	0	402
8:45 AM	9	67	33	0	22	58	5	0	14	108	12	0	14	57	10	0	409
9:00 AM	6	69	22	0	23	50	4	0	9	102	5	0	10	76	9	0	385
9:15 AM	6	50	20	1	17	50	9	0	4	109	4	0	16	62	10	0	358
9:30 AM	5	43	23	0	20	54	6	0	7	109	8	0	16	45	12	0	348
9:45 AM	7	59	17	0	15	40	8	0	6	87	6	0	19	54	13	0	331
TOTAL VOLUMES :	NL 102	NT 993	NR 637	NU 1	SL 401	ST 845	SR 150	SU 2	EL 184	ET 1489	ER 101	EU 0	WL 351	WT 915	WR 178	WU 0	TOTAL 6349
APPROACH %'s :	5.89% 57.30% 36.76% 0.06%				28.68% 60.44% 10.73% 0.14%				10.37% 83.93% 5.69% 0.00%				24.31% 63.37% 12.33% 0.00%				
PEAK HR :	07:15 AM - 08:15 AM																
PEAK HR VOL :	48	416	170	0	159	378	87	1	99	361	32	0	178	334	78	0	2341
PEAK HR FACTOR :	0.600	0.738	0.787	0.000	0.736	0.781	0.725	0.250	0.728	0.930	0.800	0.000	0.695	0.827	0.848	0.000	0.863
	0.839				0.758				0.891				0.810				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
4:00 PM	10	108	8	0	14	90	5	0	9	67	11	0	35	129	21	0	507
4:15 PM	14	86	19	0	13	65	10	0	11	53	8	0	30	106	33	0	448
4:30 PM	13	88	10	0	16	76	5	0	14	72	8	0	40	126	26	0	494
4:45 PM	6	90	17	0	15	77	11	0	8	78	9	0	41	136	30	0	518
5:00 PM	21	106	10	0	14	108	13	0	7	68	10	0	40	126	25	0	548
5:15 PM	8	99	16	0	18	112	27	0	18	78	18	0	44	123	25	0	586
5:30 PM	13	108	11	0	19	96	10	0	14	91	8	0	33	114	22	0	539
5:45 PM	8	78	18	0	21	80	10	3	8	77	13	0	11	106	17	0	450
6:00 PM	16	73	26	0	22	63	9	1	9	72	7	0	30	101	18	0	447
6:15 PM	10	58	42	0	24	63	8	1	12	78	6	0	24	76	16	0	418
6:30 PM	11	69	57	0	20	62	8	0	11	117	9	0	23	90	10	0	487
6:45 PM	12	60	23	0	14	78	9	0	9	73	7	0	23	77	13	0	398
7:00 PM	10	47	9	0	14	54	5	0	9	56	4	0	32	71	9	0	320
7:15 PM	4	53	16	0	15	49	3	0	3	66	6	0	68	91	17	0	391
7:30 PM	5	37	9	0	7	44	8	0	8	55	4	0	50	71	23	0	321
7:45 PM	11	39	12	0	11	30	3	0	8	43	3	0	40	76	11	0	287
TOTAL VOLUMES :	NL 172	NT 1199	NR 303	NU 0	SL 257	ST 1147	SR 144	SU 5	EL 158	ET 1144	ER 131	EU 0	WL 564	WT 1619	WR 316	WU 0	TOTAL 7159
APPROACH %'s :	10.27% 71.62% 18.10% 0.00%				16.55% 73.86% 9.27% 0.32%				11.03% 79.83% 9.14% 0.00%				22.57% 64.79% 12.65% 0.00%				
PEAK HR :	04:45 PM - 05:45 PM																
PEAK HR VOL :	48	403	54	0	66	393	61	0	47	315	45	0	158	499	102	0	2191
PEAK HR FACTOR :	0.571	0.933	0.794	0.000	0.868	0.877	0.565	0.000	0.653	0.865	0.625	0.000	0.898	0.917	0.850	0.000	0.935
	0.922				0.828				0.893				0.917				

VOLUME**N 35th Ave N/O Garfield St**

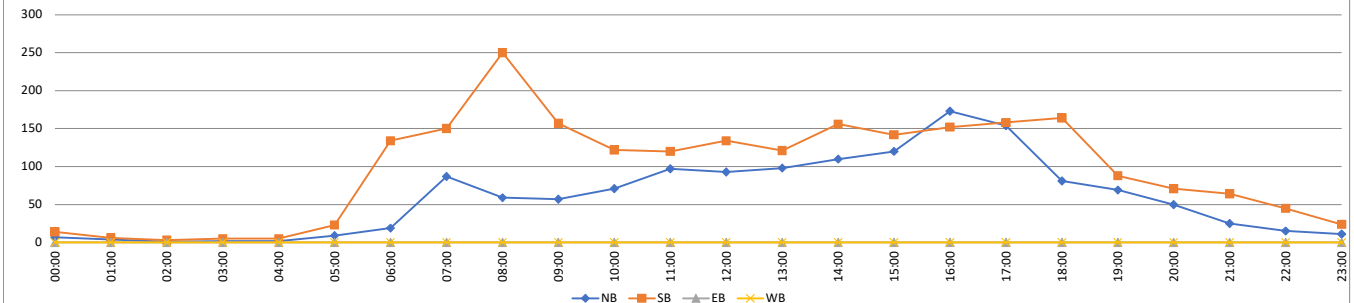
Day: Thursday

Date: 12/7/2023

City: Hollywood

Project #: FL23_140478_001

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS						
						1,414	2,308	0	0	3,722							
15-Minutes Interval											Hourly Intervals						
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	2	5			7	12:00	27	31			58	00:00	01:00	7	14		21
0:15	2	2			4	12:15	23	39			62	01:00	02:00	4	6		10
0:30	1	3			4	12:30	23	29			52	02:00	03:00	1	3		4
0:45	2	4			6	12:45	20	35			55	03:00	04:00	2	5		7
1:00	1	1			2	13:00	20	29			49	04:00	05:00	2	5		7
1:15	1	2			3	13:15	24	28			52	05:00	06:00	9	23		32
1:30	1	3			4	13:30	26	30			56	06:00	07:00	19	134		153
1:45	1	0			1	13:45	28	34			62	07:00	08:00	87	150		237
2:00	0	1			1	14:00	25	60			85	08:00	09:00	59	250		309
2:15	0	1			1	14:15	25	32			57	09:00	10:00	57	157		214
2:30	1	1			2	14:30	32	38			70	10:00	11:00	71	122		193
2:45	0	0			0	14:45	28	26			54	11:00	12:00	97	120		217
3:00	2	1			3	15:00	34	40			74	12:00	13:00	93	134		227
3:15	0	1			1	15:15	35	36			71	13:00	14:00	98	121		219
3:30	0	2			2	15:30	24	28			52	14:00	15:00	110	156		266
3:45	0	1			1	15:45	27	38			65	15:00	16:00	120	142		262
4:00	0	0			0	16:00	26	38			64	16:00	17:00	173	152		325
4:15	1	1			2	16:15	34	33			67	17:00	18:00	154	158		312
4:30	0	1			1	16:30	54	38			92	18:00	19:00	81	164		245
4:45	1	3			4	16:45	59	43			102	19:00	20:00	69	88		157
5:00	1	2			3	17:00	68	33			101	20:00	21:00	50	71		121
5:15	1	6			7	17:15	35	45			80	21:00	22:00	25	64		89
5:30	4	6			10	17:30	31	39			70	22:00	23:00	15	45		60
5:45	3	9			12	17:45	20	41			61	23:00	00:00	11	24		35
6:00	0	12			12	18:00	17	29			46	STATISTICS					
6:15	4	32			36	18:15	25	49			74		NB	SB	EB	WB	TOTAL
6:30	7	47			54	18:30	22	52			74	Peak Period	00:00	to	12:00		
6:45	8	43			51	18:45	17	34			51	Volume	415	989			1404
7:00	7	19			26	19:00	14	31			45	Peak Hour	7:30	8:00			7:30
7:15	18	37			55	19:15	23	24			47	Peak Volume	98	250			321
7:30	27	47			74	19:30	21	12			33	Peak Hour Factor	0.700	0.833			0.872
7:45	35	47			82	19:45	11	21			32	Peak Period	12:00	to	00:00		
8:00	17	75			92	20:00	15	15			30	Volume	999	1319			2318
8:15	19	54			73	20:15	12	20			32	Peak Hour	16:30	17:45			16:30
8:30	12	61			73	20:30	13	20			33	Peak Volume	216	171			375
8:45	11	60			71	20:45	10	16			26	Peak Hour Factor	0.794	0.822			0.919
9:00	14	31			45	21:00	7	13			20	Peak Period	07:00	to	09:00		
9:15	10	39			49	21:15	9	13			22	Volume	146	400			546
9:30	16	40			56	21:30	2	15			17	Peak Hour	7:30	8:00			7:30
9:45	17	47			64	21:45	7	23			30	Peak Volume	98	250			321
10:00	16	27			43	22:00	5	17			22	Peak Hour Factor	0.700	0.833			0.872
10:15	17	39			56	22:15	2	9			11	Peak Period	16:00	to	18:00		
10:30	18	28			46	22:30	4	13			17	Volume	327	310			637
10:45	20	28			48	22:45	4	6			10	Peak Hour	16:30	16:45			16:30
11:00	15	29			44	23:00	4	6			10	Peak Volume	216	160			375
11:15	36	39			75	23:15	2	9			11	Peak Hour Factor	0.794	0.889			0.919
11:30	20	24			44	23:30	2	3			5						
11:45	26	28			54	23:45	3	6			9						
TOTALS	415	989	0	0	1404	TOTALS	999	1319	0	0	2318						
SPLIT %	30%	70%	0%	0%	38%	SPLIT %	43%	57%	0%	0%	62%						



VOLUME**N 35th Ave N/O Garfield St**

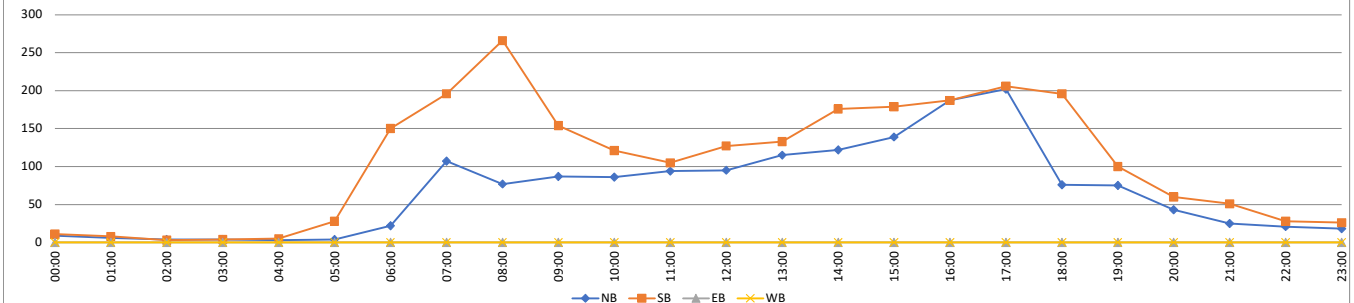
Day: Wednesday

Date: 12/6/2023

City: Hollywood

Project #: FL23_140478_001

DAILY TOTALS						NB				SB				EB				WB				Total		DAILY TOTALS					
						1,621		2,520		0		0		4,141															
15-Minutes Interval												Hourly Intervals																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL												
0:00	2	5			7	12:00	18	33			51	00:00	9	11			20												
0:15	3	1			4	12:15	34	28			62	01:00	6	8			14												
0:30	2	2			4	12:30	22	34			56	02:00	4	3			7												
0:45	2	3			5	12:45	21	32			53	03:00	4	4			8												
1:00	4	4			8	13:00	21	37			58	04:00	3	5			8												
1:15	0	0			0	13:15	34	28			62	05:00	4	28			32												
1:30	1	2			3	13:30	26	33			59	06:00	22	150			172												
1:45	1	2			3	13:45	34	35			69	07:00	107	196			303												
2:00	1	1			2	14:00	24	44			68	08:00	77	266			343												
2:15	1	1			2	14:15	40	47			87	09:00	87	154			241												
2:30	1	0			1	14:30	29	48			77	10:00	86	121			207												
2:45	1	1			2	14:45	29	37			66	11:00	94	105			199												
3:00	2	3			5	15:00	29	47			76	12:00	95	127			222												
3:15	0	0			0	15:15	32	46			78	13:00	115	133			248												
3:30	2	0			2	15:30	43	46			89	14:00	122	176			298												
3:45	0	1			1	15:45	35	40			75	15:00	139	179			318												
4:00	1	1			2	16:00	46	33			79	16:00	187	187			374												
4:15	0	2			2	16:15	41	58			99	17:00	202	206			408												
4:30	2	1			3	16:30	51	47			98	18:00	76	196			272												
4:45	0	1			1	16:45	49	49			98	19:00	75	100			175												
5:00	0	1			1	17:00	56	55			111	20:00	43	60			103												
5:15	2	6			8	17:15	67	46			113	21:00	25	51			76												
5:30	0	6			6	17:30	39	53			92	22:00	21	28			49												
5:45	2	15			17	17:45	40	52			92	23:00	18	26			44												
6:00	2	14			16	18:00	25	44			69	STATISTICS																	
6:15	6	34			40	18:15	21	57			78		NB	SB	EB	WB	TOTAL												
6:30	5	57			62	18:30	17	62			79	Peak Period	00:00	to	12:00														
6:45	9	45			54	18:45	13	33			46	Volume	503	1051			1554												
7:00	9	25			34	19:00	14	33			47	Peak Hour	7:30	7:30			7:30												
7:15	21	42			63	19:15	25	28			53	Peak Volume	126	280			406												
7:30	38	52			90	19:30	26	16			42	Peak Hour Factor	0.808	0.795			0.875												
7:45	39	77			116	19:45	10	23			33	Peak Period	12:00	to	00:00														
8:00	26	88			114	20:00	12	17			29	Volume	1118	1469			2587												
8:15	23	63			86	20:15	10	15			25	Peak Hour	16:30	17:45			16:30												
8:30	15	51			66	20:30	10	13			23	Peak Volume	223	215			420												
8:45	13	64			77	20:45	11	15			26	Peak Hour Factor	0.832	0.867			0.929												
9:00	15	37			52	21:00	5	19			24	Peak Period	07:00	to	09:00														
9:15	18	35			53	21:15	6	7			13	Volume	184	462			646												
9:30	28	40			68	21:30	7	13			20	Peak Hour	7:30	7:30			7:30												
9:45	26	42			68	21:45	7	12			19	Peak Volume	126	280			406												
10:00	21	31			52	22:00	6	7			13	Peak Hour Factor	0.808	0.795			0.875												
10:15	26	31			57	22:15	5	13			18	Peak Period	16:00	to	18:00														
10:30	24	28			52	22:30	5	7			12	Volume	389	393			782												
10:45	15	31			46	22:45	5	1			6	Peak Hour	16:30	16:15			16:30												
11:00	29	27			56	23:00	4	7			11	Peak Volume	223	209			420												
11:15	20	29			49	23:15	3	8			11	Peak Hour Factor	0.832	0.901			0.929												
11:30	20	28			48	23:30	7	7			14																		
11:45	25	21			46	23:45	4	4			8																		
TOTALS	503	1051	0	0	1554	TOTALS	1118	1469	0	0	2587																		
SPLIT %	32%	68%	0%	0%	38%	SPLIT %	43%	57%	0%	0%	62%																		



VOLUME**N 35th Ave Bet. Garfield St & Memorial Medical Office Centre Dwy**

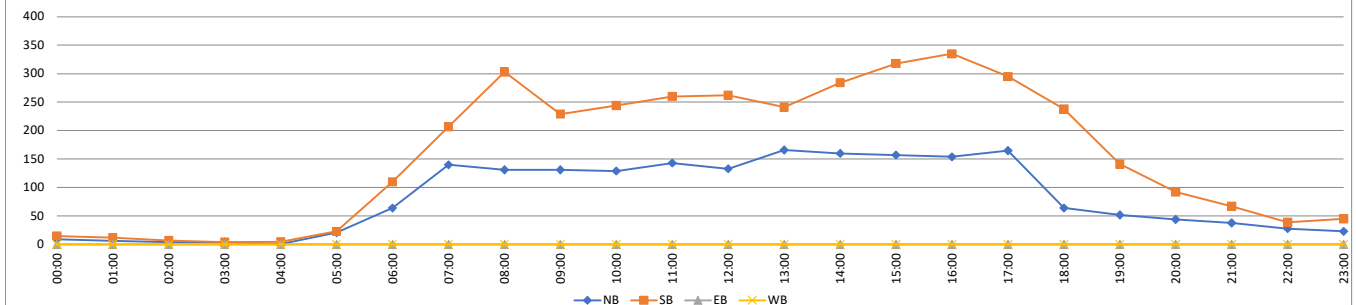
Day: Wednesday

City: Hollywood

Date: 12/6/2023

Project #: FL23_140478_002

DAILY TOTALS						NB				SB				EB				WB				Total		DAILY TOTALS					
						1,967		3,776		0		0		5,743															
15-Minutes Interval												Hourly Intervals																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL												
0:00	2	7			9	12:00	36	77			113	00:00	9	15			24												
0:15	3	2			5	12:15	37	60			97	01:00	6	12			18												
0:30	3	3			6	12:30	33	66			99	02:00	4	7			11												
0:45	1	3			4	12:45	27	59			86	03:00	4	4			8												
1:00	4	8			12	13:00	25	65			90	04:00	1	5			6												
1:15	0	0			0	13:15	50	54			104	05:00	21	23			44												
1:30	1	2			3	13:30	40	58			98	06:00	64	110			174												
1:45	1	2			3	13:45	51	64			115	07:00	140	207			347												
2:00	1	2			3	14:00	36	76			112	08:00	131	303			434												
2:15	0	1			1	14:15	53	68			121	09:00	131	229			360												
2:30	2	1			3	14:30	34	75			109	10:00	129	244			373												
2:45	1	3			4	14:45	37	65			102	11:00	143	260			403												
3:00	3	2			5	15:00	43	69			112	12:00	133	262			395												
3:15	1	0			1	15:15	28	78			106	13:00	166	241			407												
3:30	0	1			1	15:30	48	93			141	14:00	160	284			444												
3:45	0	1			1	15:45	38	78			116	15:00	157	318			475												
4:00	0	1			1	16:00	46	74			120	16:00	154	335			489												
4:15	1	2			3	16:15	36	90			126	17:00	165	295			460												
4:30	0	1			1	16:30	38	88			126	18:00	64	238			302												
4:45	0	1			1	16:45	34	83			117	19:00	52	141			193												
5:00	0	1			1	17:00	35	84			119	20:00	44	92			136												
5:15	3	5			8	17:15	54	66			120	21:00	38	67			105												
5:30	4	4			8	17:30	40	76			116	22:00	28	39			67												
5:45	14	13			27	17:45	36	69			105	23:00	23	45			68												
6:00	9	17			26	18:00	18	66			84	STATISTICS																	
6:15	10	23			33	18:15	19	59			78		NB	SB	EB	WB	TOTAL												
6:30	22	34			56	18:30	18	69			87	Peak Period	00:00	to	12:00														
6:45	23	36			59	18:45	9	44			53	Volume	783	1419			2202												
7:00	23	33			56	19:00	13	38			51	Peak Hour	7:30	8:00			7:30												
7:15	30	44			74	19:15	13	42			55	Peak Volume	161	303			454												
7:30	40	56			96	19:30	17	30			47	Peak Hour Factor	0.856	0.806			0.853												
7:45	47	74			121	19:45	9	31			40	Peak Period	12:00	to	00:00														
8:00	39	94			133	20:00	13	29			42	Volume	1184	2357			3541												
8:15	35	69			104	20:15	10	26			36	Peak Hour	13:30	16:15			15:30												
8:30	31	65			96	20:30	10	20			30	Peak Volume	180	345			503												
8:45	26	75			101	20:45	11	17			28	Peak Hour Factor	0.849	0.958			0.892												
9:00	26	57			83	21:00	5	22			27	Peak Period	07:00	to	09:00														
9:15	35	51			86	21:15	11	12			23	Volume	271	510			781												
9:30	33	58			91	21:30	11	17			28	Peak Hour	7:30	8:00			7:30												
9:45	37	63			100	21:45	11	16			27	Peak Volume	161	303			454												
10:00	29	65			94	22:00	7	9			16	Peak Hour Factor	0.856	0.806			0.853												
10:15	30	59			89	22:15	5	14			19	Peak Period	16:00	to	18:00														
10:30	29	54			83	22:30	7	9			16	Volume	319	630			949												
10:45	41	66			107	22:45	9	7			16	Peak Hour	17:00	16:15			16:00												
11:00	33	70			103	23:00	2	9			11	Peak Volume	165	345			489												
11:15	37	61			98	23:15	6	10			16	Peak Hour Factor	0.764	0.958			0.970												
11:30	39	71			110	23:30	9	18			27																		
11:45	34	58			92	23:45	6	8			14																		
TOTALS	783	1419	0	0	2202	TOTALS	1184	2357	0	0	3541																		
SPLIT %	36%	64%	0%	0%	38%	SPLIT %	33%	67%	0%	0%	62%																		



VOLUME**N 35th Ave Bet. Garfield St & Memorial Medical Office Centre Dwy**

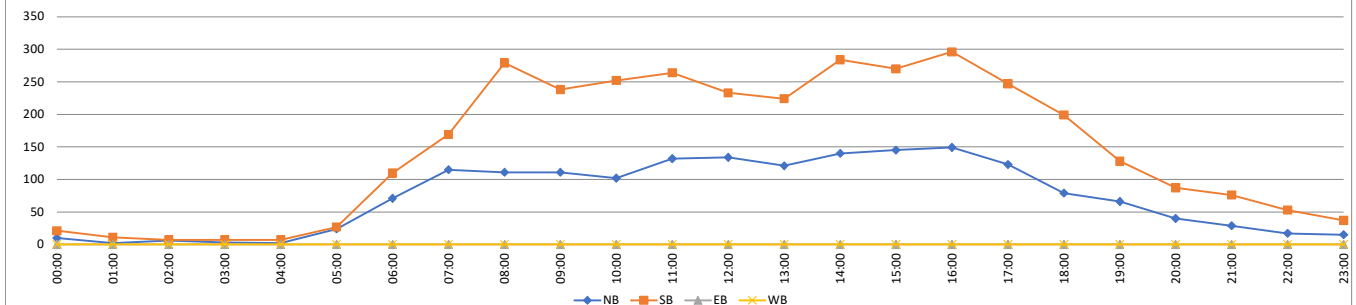
Day: Thursday

City: Hollywood

Date: 12/7/2023

Project #: FL23_140478_002

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS						
						1,747	3,526	0	0	5,273							
15-Minutes Interval											Hourly Intervals						
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	3	8			11	12:00	37	56			93	00:00 01:00	10	21			31
0:15	1	3			4	12:15	30	64			94	01:00 02:00	2	11			13
0:30	1	5			6	12:30	34	50			84	02:00 03:00	6	7			13
0:45	5	5			10	12:45	33	63			96	03:00 04:00	3	7			10
1:00	0	4			4	13:00	25	52			77	04:00 05:00	2	7			9
1:15	1	3			4	13:15	32	56			88	05:00 06:00	24	27			51
1:30	1	3			4	13:30	31	53			84	06:00 07:00	71	110			181
1:45	0	1			1	13:45	33	63			96	07:00 08:00	115	169			284
2:00	0	2			2	14:00	33	85			118	08:00 09:00	111	279			390
2:15	1	0			1	14:15	33	72			105	09:00 10:00	111	238			349
2:30	2	3			5	14:30	40	60			100	10:00 11:00	102	252			354
2:45	3	2			5	14:45	34	67			101	11:00 12:00	132	264			396
3:00	2	3			5	15:00	39	63			102	12:00 13:00	134	233			367
3:15	0	1			1	15:15	42	74			116	13:00 14:00	121	224			345
3:30	1	2			3	15:30	34	64			98	14:00 15:00	140	284			424
3:45	0	1			1	15:45	30	69			99	15:00 16:00	145	270			415
4:00	0	0			0	16:00	21	73			94	16:00 17:00	149	296			445
4:15	1	1			2	16:15	30	67			97	17:00 18:00	123	247			370
4:30	0	2			2	16:30	48	75			123	18:00 19:00	79	199			278
4:45	1	4			5	16:45	50	81			131	19:00 20:00	66	128			194
5:00	2	3			5	17:00	49	61			110	20:00 21:00	40	87			127
5:15	4	6			10	17:15	22	74			96	21:00 22:00	29	76			105
5:30	12	8			20	17:30	31	53			84	22:00 23:00	17	53			70
5:45	6	10			16	17:45	21	59			80	23:00 00:00	15	37			52
6:00	6	11			17	18:00	18	45			63	STATISTICS					
6:15	14	29			43	18:15	22	59			81		NB	SB	EB	WB	TOTAL
6:30	25	33			58	18:30	22	56			78	Peak Period	00:00	to	12:00		
6:45	26	37			63	18:45	17	39			56	Volume	689	1392			2081
7:00	19	22			41	19:00	17	37			54	Peak Hour	7:30	8:00			7:45
7:15	21	42			63	19:15	18	44			62	Peak Volume	137	279			396
7:30	29	44			73	19:30	24	17			41	Peak Hour Factor	0.745	0.906			0.925
7:45	46	61			107	19:45	7	30			37	Peak Period	12:00	to	00:00		
8:00	28	77			105	20:00	11	22			33	Volume	1058	2134			3192
8:15	34	61			95	20:15	10	24			34	Peak Hour	16:15	16:00			16:15
8:30	21	68			89	20:30	12	24			36	Peak Volume	177	296			461
8:45	28	73			101	20:45	7	17			24	Peak Hour Factor	0.885	0.914			0.880
9:00	25	49			74	21:00	12	19			31	Peak Period	07:00	to	09:00		
9:15	28	56			84	21:15	7	14			21	Volume	226	448			674
9:30	28	58			86	21:30	4	16			20	Peak Hour	7:30	8:00			7:45
9:45	30	75			105	21:45	6	27			33	Peak Volume	137	279			396
10:00	30	67			97	22:00	4	19			23	Peak Hour Factor	0.745	0.906			0.925
10:15	28	68			96	22:15	2	11			13	Peak Period	16:00	to	18:00		
10:30	18	56			74	22:30	3	15			18	Volume	272	543			815
10:45	26	61			87	22:45	8	8			16	Peak Hour	16:15	16:00			16:15
11:00	32	72			104	23:00	6	10			16	Peak Volume	177	296			461
11:15	35	67			102	23:15	4	12			16	Peak Hour Factor	0.885	0.914			0.880
11:30	28	60			88	23:30	2	4			6						
11:45	37	65			102	23:45	3	11			14						
TOTALS	689	1392	0	0	2081	TOTALS	1058	2134	0	0	3192						
SPLIT %	33%	67%	0%	0%	39%	SPLIT %	33%	67%	0%	0%	61%						



VOLUME**N 35th Ave Bet. Memorial Medical Office Centre Dwy & Johnson St**

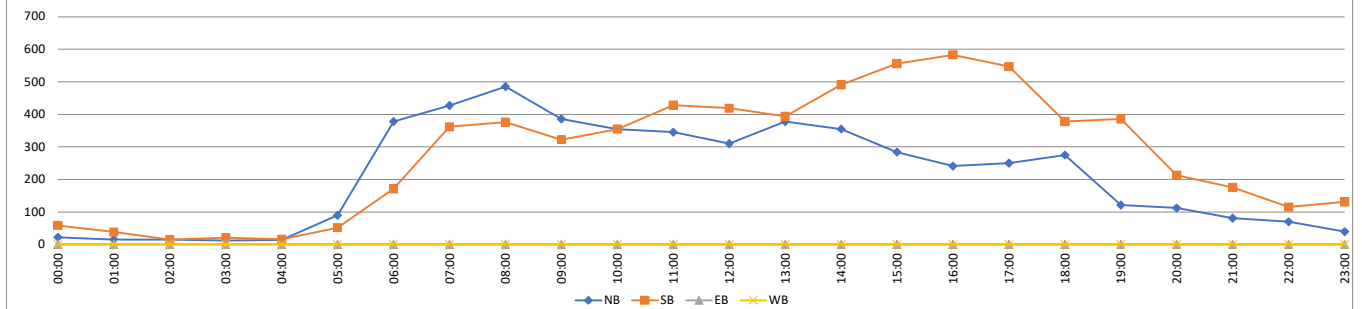
Day: Wednesday

City: Hollywood

Date: 12/6/2023

Project #: FL23_140478_003

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS							
						5,060	6,603	0	0	11,663								
15-Minutes Interval											Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	
0:00	8	26			34	12:00	61	125			186	00:00 01:00	22	59			81	
0:15	8	16			24	12:15	71	92			163	01:00 02:00	15	38			53	
0:30	4	8			12	12:30	95	116			211	02:00 03:00	15	15			30	
0:45	2	9			11	12:45	83	86			169	03:00 04:00	12	21			33	
1:00	6	15			21	13:00	81	91			172	04:00 05:00	14	16			30	
1:15	3	7			10	13:15	100	97			197	05:00 06:00	90	52			142	
1:30	2	10			12	13:30	88	93			181	06:00 07:00	378	171			549	
1:45	4	6			10	13:45	109	113			222	07:00 08:00	427	362			789	
2:00	3	3			6	14:00	85	124			209	08:00 09:00	485	376			861	
2:15	5	2			7	14:15	98	126			224	09:00 10:00	386	322			708	
2:30	5	3			8	14:30	80	127			207	10:00 11:00	355	355			710	
2:45	2	7			9	14:45	92	114			206	11:00 12:00	345	428			773	
3:00	2	8			10	15:00	83	121			204	12:00 13:00	310	419			729	
3:15	5	7			12	15:15	62	136			198	13:00 14:00	378	394			772	
3:30	4	3			7	15:30	70	164			234	14:00 15:00	355	491			846	
3:45	1	3			4	15:45	69	135			204	15:00 16:00	284	556			840	
4:00	1	1			2	16:00	75	152			227	16:00 17:00	241	583			824	
4:15	4	4			8	16:15	58	143			201	17:00 18:00	250	547			797	
4:30	5	7			12	16:30	52	156			208	18:00 19:00	275	378			653	
4:45	4	4			8	16:45	56	132			188	19:00 20:00	121	386			507	
5:00	13	4			17	17:00	56	163			219	20:00 21:00	112	213			325	
5:15	10	13			23	17:15	65	142			207	21:00 22:00	81	175			256	
5:30	30	13			43	17:30	66	129			195	22:00 23:00	70	115			185	
5:45	37	22			59	17:45	63	113			176	23:00 00:00	39	131			170	
6:00	41	25			66	18:00	59	101			160	STATISTICS						
6:15	85	31			116	18:15	76	96			172			NB	SB	EB	WB	TOTAL
6:30	147	54			201	18:30	101	103			204	Peak Period	00:00	to	12:00			
6:45	105	61			166	18:45	39	78			117	Volume	2544	2215			4759	
7:00	72	57			129	19:00	32	84			116	Peak Hour	7:45	11:00			7:45	
7:15	95	108			203	19:15	30	138			168	Peak Volume	522	428			900	
7:30	111	103			214	19:30	31	89			120	Peak Hour Factor	0.876	0.877			0.926	
7:45	149	94			243	19:45	28	75			103	Peak Period	12:00	to	00:00			
8:00	133	101			234	20:00	29	63			92	Volume	2516	4388			6904	
8:15	108	86			194	20:15	26	57			83	Peak Hour	13:15	15:30			15:30	
8:30	132	97			229	20:30	36	53			89	Peak Volume	382	594			866	
8:45	112	92			204	20:45	21	40			61	Peak Hour Factor	0.876	0.905			0.925	
9:00	102	72			174	21:00	21	46			67	Peak Period	07:00	to	09:00			
9:15	97	67			164	21:15	22	50			72	Volume	912	738			1650	
9:30	82	87			169	21:30	19	44			63	Peak Hour	7:45	7:15			7:45	
9:45	105	96			201	21:45	19	35			54	Peak Volume	522	406			900	
10:00	95	93			188	22:00	17	31			48	Peak Hour Factor	0.876	0.940			0.926	
10:15	94	87			181	22:15	14	36			50	Peak Period	16:00	to	18:00			
10:30	79	84			163	22:30	18	21			39	Volume	491	1130			1621	
10:45	87	91			178	22:45	21	27			48	Peak Hour	17:00	16:15			16:00	
11:00	92	122			214	23:00	8	40			48	Peak Volume	250	594			824	
11:15	98	105			203	23:15	10	36			46	Peak Hour Factor	0.947	0.911			0.907	
11:30	83	106			189	23:30	15	36			51							
11:45	72	95			167	23:45	6	19			25							
TOTALS	2544	2215	0	0	4759	TOTALS	2516	4388	0	0	6904							
SPLIT %	53%	47%	0%	0%	41%	SPLIT %	36%	64%	0%	0%	59%							



VOLUME**N 35th Ave Bet. Memorial Medical Office Centre Dwy & Johnson St**

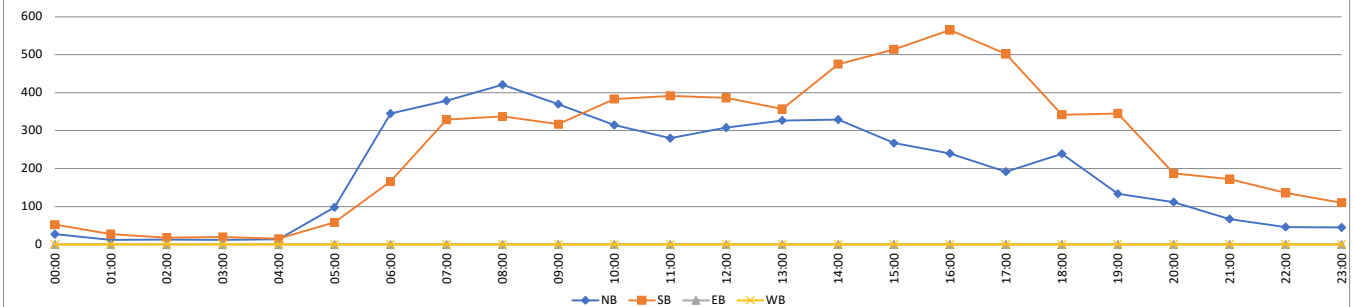
Day: Thursday

City: Hollywood

Date: 12/7/2023

Project #: FL23_140478_003

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS						
						4,592	6,205	0	0	10,797							
15-Minutes Interval											Hourly Intervals						
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	10	16			26	12:00	78	100			178	00:00	01:00	27	52		79
0:15	4	14			18	12:15	58	99			157	01:00	02:00	12	27		39
0:30	6	10			16	12:30	69	96			165	02:00	03:00	13	18		31
0:45	7	12			19	12:45	103	91			194	03:00	04:00	12	20		32
1:00	3	12			15	13:00	70	79			149	04:00	05:00	14	15		29
1:15	3	7			10	13:15	91	99			190	05:00	06:00	98	58		156
1:30	5	6			11	13:30	79	84			163	06:00	07:00	345	166		511
1:45	1	2			3	13:45	87	95			182	07:00	08:00	379	329		708
2:00	3	6			9	14:00	78	131			209	08:00	09:00	421	337		758
2:15	3	4			7	14:15	77	122			199	09:00	10:00	370	317		687
2:30	4	3			7	14:30	83	105			188	10:00	11:00	315	383		698
2:45	3	5			8	14:45	91	117			208	11:00	12:00	280	392		672
3:00	6	7			13	15:00	69	123			192	12:00	13:00	308	386		694
3:15	1	4			5	15:15	69	133			202	13:00	14:00	327	357		684
3:30	1	6			7	15:30	76	122			198	14:00	15:00	329	475		804
3:45	4	3			7	15:45	53	136			189	15:00	16:00	267	514		781
4:00	2	3			5	16:00	52	128			180	16:00	17:00	240	565		805
4:15	3	2			5	16:15	57	132			189	17:00	18:00	192	502		694
4:30	6	4			10	16:30	59	147			206	18:00	19:00	239	342		581
4:45	3	6			9	16:45	72	158			230	19:00	20:00	134	345		479
5:00	7	9			16	17:00	59	163			222	20:00	21:00	112	187		299
5:15	16	12			28	17:15	41	145			186	21:00	22:00	67	172		239
5:30	31	16			47	17:30	56	106			162	22:00	23:00	46	136		182
5:45	44	21			65	17:45	36	88			124	23:00	00:00	45	110		155
6:00	41	28			69	18:00	46	92			138	STATISTICS					
6:15	75	38			113	18:15	67	92			159		NB	SB	EB	WB	TOTAL
6:30	132	41			173	18:30	79	81			160	Peak Period	00:00	to	12:00		
6:45	97	59			156	18:45	47	77			124	Volume	2286	2114			4400
7:00	82	51			133	19:00	34	78			112	Peak Hour	7:45	10:30			7:15
7:15	87	107			194	19:15	39	113			152	Peak Volume	435	402			783
7:30	95	90			185	19:30	35	77			112	Peak Hour Factor	0.946	0.948			0.941
7:45	115	81			196	19:45	26	77			103	Peak Period	12:00	to	00:00		
8:00	102	106			208	20:00	29	39			68	Volume	2306	4091			6397
8:15	104	76			180	20:15	24	53			77	Peak Hour	12:45	16:30			16:15
8:30	114	72			186	20:30	35	53			88	Peak Volume	343	613			847
8:45	101	83			184	20:45	24	42			66	Peak Hour Factor	0.833	0.940			0.921
9:00	87	61			148	21:00	19	46			65	Peak Period	07:00	to	09:00		
9:15	89	74			163	21:15	18	45			63	Volume	800	666			1466
9:30	98	78			176	21:30	14	40			54	Peak Hour	7:45	7:15			7:15
9:45	96	104			200	21:45	16	41			57	Peak Volume	435	384			783
10:00	73	101			174	22:00	13	46			59	Peak Hour Factor	0.946	0.897			0.941
10:15	89	84			173	22:15	10	31			41	Peak Period	16:00	to	18:00		
10:30	78	92			170	22:30	8	37			45	Volume	432	1067			1499
10:45	75	106			181	22:45	15	22			37	Peak Hour	16:15	16:30			16:15
11:00	77	101			178	23:00	18	38			56	Peak Volume	247	613			847
11:15	73	103			176	23:15	11	25			36	Peak Hour Factor	0.858	0.940			0.921
11:30	62	89			151	23:30	5	32			37						
11:45	68	99			167	23:45	11	15			26						
TOTALS	2286	2114	0	0	4400	TOTALS	2306	4091	0	0	6397						
SPLIT %	52%	48%	0%	0%	41%	SPLIT %	36%	64%	0%	0%	59%						



VOLUME**Johnson St Bet. N 35th Ave & N Park Rd**

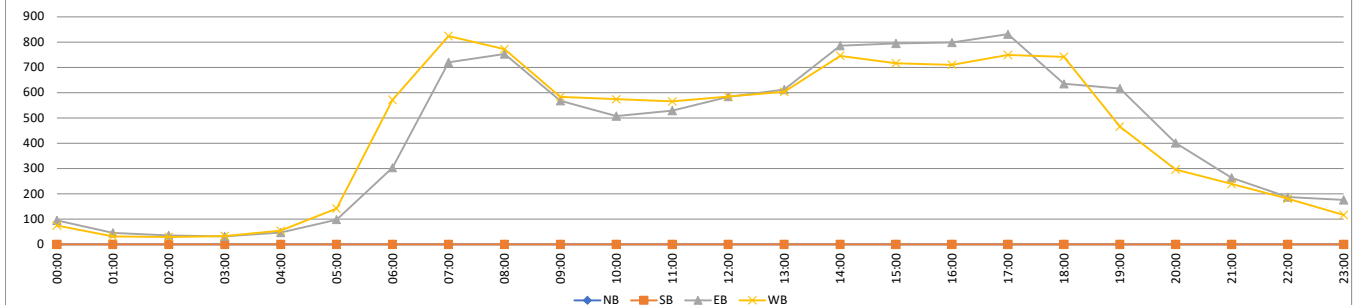
Day: Wednesday

City: Hollywood

Date: 12/6/2023

Project #: FL23_140478_004

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS						
						0	0	10,419	10,409	20,828							
15-Minutes Interval												Hourly Intervals					
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00			36	23	59	12:00			145	116	261	00:00 01:00			95	75	170
00:15			19	29	48	12:15			136	158	294	01:00 02:00			46	32	78
00:30			20	15	35	12:30			146	159	305	02:00 03:00			36	30	66
00:45			20	8	28	12:45			157	152	309	03:00 04:00			32	33	65
01:00			15	10	25	13:00			143	131	274	04:00 05:00			47	54	101
01:15			12	7	19	13:15			142	132	274	05:00 06:00			98	142	240
01:30			8	7	15	13:30			159	180	339	06:00 07:00			303	572	875
01:45			11	8	19	13:45			168	161	329	07:00 08:00			720	824	1544
02:00			6	4	10	14:00			176	191	367	08:00 09:00			753	772	1525
02:15			12	13	25	14:15			204	177	381	09:00 10:00			568	584	1152
02:30			8	7	15	14:30			222	176	398	10:00 11:00			508	574	1082
02:45			10	6	16	14:45			184	202	386	11:00 12:00			529	565	1094
03:00			7	11	18	15:00			201	185	386	12:00 13:00			584	585	1169
03:15			10	9	19	15:15			186	180	366	13:00 14:00			612	604	1216
03:30			8	7	15	15:30			213	187	400	14:00 15:00			786	746	1532
03:45			7	6	13	15:45			195	165	360	15:00 16:00			795	717	1512
04:00			3	8	11	16:00			185	185	370	16:00 17:00			798	710	1508
04:15			13	9	22	16:15			207	155	362	17:00 18:00			831	749	1580
04:30			15	16	31	16:30			211	175	386	18:00 19:00			635	742	1377
04:45			16	21	37	16:45			195	195	390	19:00 20:00			616	466	1082
05:00			16	23	39	17:00			219	180	399	20:00 21:00			401	296	697
05:15			16	20	36	17:15			205	176	381	21:00 22:00			263	239	502
05:30			34	37	71	17:30			214	200	414	22:00 23:00			187	181	368
05:45			32	62	94	17:45			193	193	386	23:00 00:00			176	117	293
06:00			33	73	106	18:00			182	185	367	STATISTICS					
06:15			60	147	207	18:15			165	203	368		NB	SB	EB	WB	TOTAL
06:30			81	187	268	18:30			145	212	357	Peak Period	00:00	to	12:00		
06:45			129	165	294	18:45			143	142	285	Volume			3735	4257	7992
07:00			140	158	298	19:00			135	130	265	Peak Hour			7:30	7:30	7:30
07:15			182	179	361	19:15			181	127	308	Peak Volume			786	911	1697
07:30			201	217	418	19:30			183	105	288	Peak Hour Factor			0.963	0.844	0.908
07:45			197	270	467	19:45			117	104	221	Peak Period	12:00	to	00:00		
08:00			204	215	419	20:00			115	79	194	Volume			6684	6152	12836
08:15			184	209	393	20:15			102	70	172	Peak Hour			16:45	17:45	16:45
08:30			182	203	385	20:30			92	82	174	Peak Volume			833	793	1584
08:45			183	145	328	20:45			92	65	157	Peak Hour Factor			0.951	0.935	0.957
09:00			158	186	344	21:00			77	75	152	Peak Period	07:00	to	09:00		
09:15			126	130	256	21:15			61	60	121	Volume			1473	1596	3069
09:30			149	130	279	21:30			52	47	99	Peak Hour			7:30	7:30	7:30
09:45			135	138	273	21:45			73	57	130	Peak Volume			786	911	1697
10:00			116	155	271	22:00			43	42	85	Peak Hour Factor			0.963	0.844	0.908
10:15			137	144	281	22:15			55	53	108	Peak Period	16:00	to	18:00		
10:30			115	142	257	22:30			44	48	92	Volume			1629	1459	3088
10:45			140	133	273	22:45			45	38	83	Peak Hour			16:45	16:45	16:45
11:00			140	130	270	23:00			56	39	95	Peak Volume			833	751	1584
11:15			123	145	268	23:15			52	30	82	Peak Hour Factor			0.951	0.939	0.957
11:30			137	130	267	23:30			41	27	68						
11:45			129	160	289	23:45			27	21	48						
TOTALS	0	0	3735	4257	7992	TOTALS	0	0	6684	6152	12836						
SPLIT %	0%	0%	47%	53%	38%	SPLIT %	0%	0%	52%	48%	62%						



VOLUME**Johnson St Bet. N 35th Ave & N Park Rd**

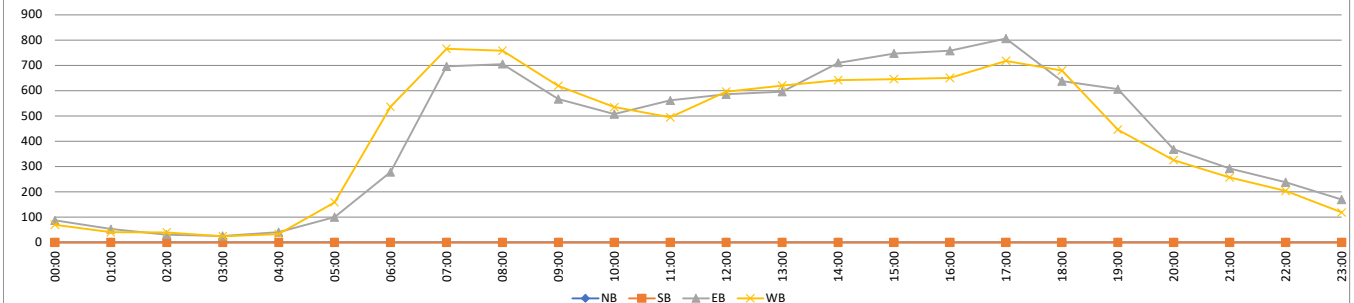
Day: Thursday

City: Hollywood

Date: 12/7/2023

Project #: FL23_140478_004

DAILY TOTALS						NB				SB				EB				WB				Total		DAILY TOTALS					
						0		0		10,168		9,979		20,147															
15-Minutes Interval												Hourly Intervals																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL												
00:00			27	23	50	12:00			139	155	294	00:00 01:00			87	70	157												
00:15			21	18	39	12:15			145	146	291	01:00 02:00			53	41	94												
00:30			25	18	43	12:30			150	156	306	02:00 03:00			31	40	71												
00:45			14	11	25	12:45			152	139	291	03:00 04:00			26	25	51												
01:00			17	9	26	13:00			135	135	270	04:00 05:00			41	33	74												
01:15			13	10	23	13:15			148	157	305	05:00 06:00			100	159	259												
01:30			15	11	26	13:30			150	173	323	06:00 07:00			278	536	814												
01:45			8	11	19	13:45			163	155	318	07:00 08:00			696	766	1462												
02:00			13	12	25	14:00			184	161	345	08:00 09:00			705	758	1463												
02:15			7	12	19	14:15			188	143	331	09:00 10:00			567	619	1186												
02:30			7	9	16	14:30			175	154	329	10:00 11:00			508	535	1043												
02:45			4	7	11	14:45			163	183	346	11:00 12:00			561	495	1056												
03:00			6	8	14	15:00			200	179	379	12:00 13:00			586	596	1182												
03:15			4	5	9	15:15			187	167	354	13:00 14:00			596	620	1216												
03:30			11	8	19	15:30			187	148	335	14:00 15:00			710	641	1351												
03:45			5	4	9	15:45			173	152	325	15:00 16:00			747	646	1393												
04:00			9	7	16	16:00			175	174	349	16:00 17:00			758	650	1408												
04:15			12	8	20	16:15			171	154	325	17:00 18:00			806	718	1524												
04:30			8	5	13	16:30			214	151	365	18:00 19:00			638	679	1317												
04:45			12	13	25	16:45			198	171	369	19:00 20:00			606	446	1052												
05:00			11	20	31	17:00			211	186	397	20:00 21:00			368	326	694												
05:15			20	21	41	17:15			210	195	405	21:00 22:00			292	257	549												
05:30			31	42	73	17:30			197	159	356	22:00 23:00			238	204	442												
05:45			38	76	114	17:45			188	178	366	23:00 00:00			170	119	289												
06:00			33	68	101	18:00			162	195	357	STATISTICS																	
06:15			56	123	179	18:15			172	182	354		NB	SB	EB	WB	TOTAL												
06:30			61	191	252	18:30			149	174	323	Peak Period	00:00	to	12:00														
06:45			128	154	282	18:45			155	128	283	Volume			3653	4077	7730												
07:00			146	134	280	19:00			164	129	293	Peak Hour			7:30	7:30	7:30												
07:15			184	188	372	19:15			165	117	282	Peak Volume			747	845	1592												
07:30			188	206	394	19:30			147	96	243	Peak Hour Factor			0.968	0.888	0.957												
07:45			178	238	416	19:45			130	104	234	Peak Period	12:00	to	00:00														
08:00			193	209	402	20:00			97	83	180	Volume			6515	5902	12417												
08:15			188	192	380	20:15			101	92	193	Peak Hour			16:30	17:45	16:30												
08:30			173	182	355	20:30			87	91	178	Peak Volume			833	729	1536												
08:45			151	175	326	20:45			83	60	143	Peak Hour Factor			0.973	0.935	0.948												
09:00			141	155	296	21:00			78	78	156	Peak Period	07:00	to	09:00														
09:15			135	133	268	21:15			69	60	129	Volume			1401	1524	2925												
09:30			141	182	323	21:30			78	56	134	Peak Hour			7:30	7:30	7:30												
09:45			150	149	299	21:45			67	63	130	Peak Volume			747	845	1592												
10:00			128	126	254	22:00			73	68	141	Peak Hour Factor			0.968	0.888	0.957												
10:15			120	142	262	22:15			54	41	95	Peak Period	16:00	to	18:00														
10:30			126	133	259	22:30			68	44	112	Volume			1564	1368	2932												
10:45			134	134	268	22:45			43	51	94	Peak Hour			16:30	17:00	16:30												
11:00			124	131	255	23:00			46	39	85	Peak Volume			833	718	1536												
11:15			122	136	258	23:15			45	26	71	Peak Hour Factor			0.973	0.921	0.948												
11:30			150	101	251	23:30			50	28	78																		
11:45			165	127	292	23:45			29	26	55																		
TOTALS	0	0	3653	4077	7730	TOTALS	0	0	6515	5902	12417																		
SPLIT %	0%	0%	47%	53%	38%	SPLIT %	0%	0%	52%	48%	62%																		



VOLUME**Johnson St Bet. N 40th Ave & Employee Parking Dwy W**

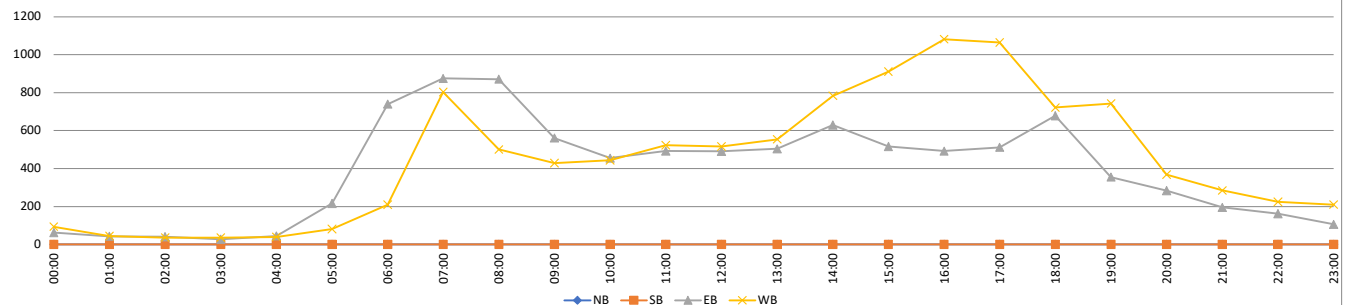
Day: Wednesday

City: Hollywood

Date: 12/6/2023

Project #: FL23_140476_001

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS						
						0	0	9,357	10,704	20,061							
15-Minutes Interval											Hourly Intervals						
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			25	27	52	12:00			124	133	257	00:00	01:00		63	94	157
0:15			10	35	45	12:15			117	147	264	01:00	02:00		43	44	87
0:30			15	19	34	12:30			107	122	229	02:00	03:00		41	36	77
0:45			13	13	26	12:45			143	114	257	03:00	04:00		28	36	64
1:00			16	17	33	13:00			102	123	225	04:00	05:00		45	40	85
1:15			7	8	15	13:15			121	116	237	05:00	06:00		216	81	297
1:30			11	13	24	13:30			134	160	294	06:00	07:00		740	209	949
1:45			9	6	15	13:45			147	155	302	07:00	08:00		875	803	1678
2:00			7	9	16	14:00			145	188	333	08:00	09:00		871	501	1372
2:15			14	13	27	14:15			145	204	349	09:00	10:00		561	428	989
2:30			9	6	15	14:30			168	192	360	10:00	11:00		455	444	899
2:45			11	8	19	14:45			172	200	372	11:00	12:00		492	523	1015
3:00			3	15	18	15:00			133	217	350	12:00	13:00		491	516	1007
3:15			9	11	20	15:15			123	214	337	13:00	14:00		504	554	1058
3:30			8	8	16	15:30			133	263	396	14:00	15:00		630	784	1414
3:45			8	2	10	15:45			127	217	344	15:00	16:00		516	911	1427
4:00			6	6	12	16:00			104	256	360	16:00	17:00		492	1082	1574
4:15			11	14	25	16:15			140	264	404	17:00	18:00		512	1065	1577
4:30			11	11	22	16:30			117	285	402	18:00	19:00		679	722	1401
4:45			17	9	26	16:45			131	277	408	19:00	20:00		355	743	1098
5:00			28	13	41	17:00			117	290	407	20:00	21:00		284	368	652
5:15			37	13	50	17:15			124	297	421	21:00	22:00		195	285	480
5:30			67	30	97	17:30			134	257	391	22:00	23:00		163	225	388
5:45			84	25	109	17:45			137	221	358	23:00	00:00		106	210	316
6:00			91	31	122	18:00			154	204	358	STATISTICS					
6:15			186	47	233	18:15			184	182	366	Peak Period Volume Peak Hour Peak Volume Peak Hour Factor	00:00	to	12:00		
6:30			233	64	297	18:30			193	184	377						
6:45			230	67	297	18:45			148	152	300						
7:00			220	126	346	19:00			101	153	254						
7:15			204	246	450	19:15			101	237	338	Peak Period Volume Peak Hour Peak Volume Peak Hour Factor	12:00	to	00:00		
7:30			226	249	475	19:30			89	203	292						
7:45			225	182	407	19:45			64	150	214						
8:00			239	144	383	20:00			63	107	170						
8:15			239	127	366	20:15			81	99	180	Peak Period Volume Peak Hour Peak Volume Peak Hour Factor	16:00	to	18:00		
8:30			200	124	324	20:30			68	93	161						
8:45			193	106	299	20:45			72	69	141						
9:00			143	129	272	21:00			49	83	132						
9:15			133	98	231	21:15			54	81	135	Peak Period Volume Peak Hour Peak Volume Peak Hour Factor	07:00	to	09:00		
9:30			145	95	240	21:30			34	68	102						
9:45			140	106	246	21:45			58	53	111						
10:00			105	116	221	22:00			35	67	102						
10:15			117	108	225	22:15			48	64	112	Peak Period Volume Peak Hour Peak Volume Peak Hour Factor	16:00	to	18:00		
10:30			105	113	218	22:30			43	56	99						
10:45			128	107	235	22:45			37	38	75						
11:00			123	132	255	23:00			29	73	102						
11:15			102	125	227	23:15			34	55	89	Peak Period Volume Peak Hour Peak Volume Peak Hour Factor	16:00	to	18:00		
11:30			132	125	257	23:30			25	57	82						
11:45			135	141	276	23:45			18	25	43						
TOTALS	0	0	4430	3239	7669	TOTALS	0	0	4927	7465	12392						
SPLIT %	0%	0%	58%	42%	38%	SPLIT %	0%	0%	40%	60%	62%						



VOLUME**Johnson St Bet. N 40th Ave & Employee Parking Dwy W**

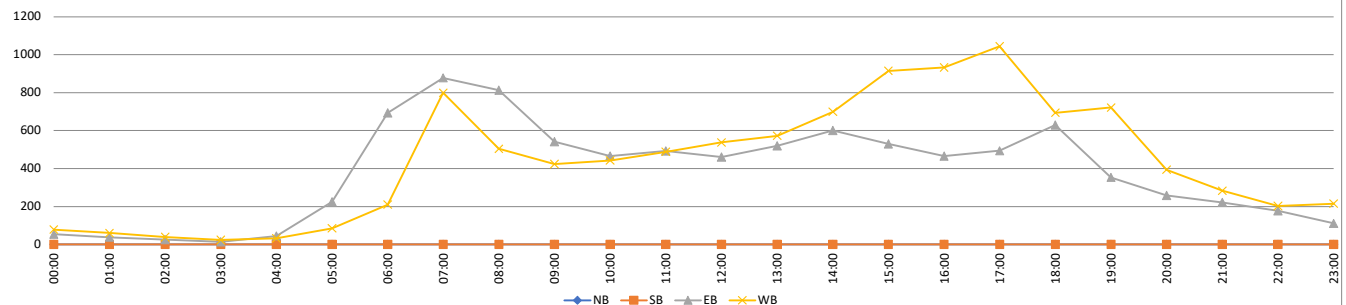
Day: Thursday

City: Hollywood

Date: 12/7/2023

Project #: FL23_140476_001

DAILY TOTALS						NB				SB				EB				WB				Total		DAILY TOTALS						
						0				0				9,109				10,400				19,509								
15-Minutes Interval													Hourly Intervals																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL													
0:00			15	20	35	12:00			103	147	250	00:00	01:00		54	78	132													
0:15			16	25	41	12:15			111	132	243	01:00	02:00		38	60	98													
0:30			10	17	27	12:30			112	136	248	02:00	03:00		26	39	65													
0:45			13	16	29	12:45			135	123	258	03:00	04:00		14	24	38													
1:00			14	19	33	13:00			112	135	247	04:00	05:00		45	33	78													
1:15			8	18	26	13:15			131	137	268	05:00	06:00		225	85	310													
1:30			9	11	20	13:30			123	156	279	06:00	07:00		693	210	903													
1:45			7	12	19	13:45			154	145	299	07:00	08:00		878	799	1677													
2:00			7	11	18	14:00			135	163	298	08:00	09:00		813	504	1317													
2:15			9	11	20	14:15			153	151	304	09:00	10:00		542	423	965													
2:30			7	10	17	14:30			164	188	352	10:00	11:00		466	443	909													
2:45			3	7	10	14:45			148	197	345	11:00	12:00		493	489	982													
3:00			2	2	4	15:00			137	215	352	12:00	13:00		461	538	999													
3:15			1	11	12	15:15			147	229	376	13:00	14:00		520	573	1093													
3:30			9	9	18	15:30			121	264	385	14:00	15:00		600	699	1299													
3:45			2	2	4	15:45			125	207	332	15:00	16:00		530	915	1445													
4:00			9	9	18	16:00			82	221	303	16:00	17:00		465	933	1398													
4:15			12	10	22	16:15			136	184	320	17:00	18:00		494	1044	1538													
4:30			11	5	16	16:30			127	228	355	18:00	19:00		630	694	1324													
4:45			13	9	22	16:45			120	300	420	19:00	20:00		354	722	1076													
5:00			17	10	27	17:00			106	294	400	20:00	21:00		258	394	652													
5:15			44	16	60	17:15			124	292	416	21:00	22:00		222	283	505													
5:30			71	25	96	17:30			135	237	372	22:00	23:00		177	203	380													
5:45			93	34	127	17:45			129	221	350	23:00	00:00		111	215	326													
6:00			75	31	106	18:00			127	205	332	STATISTICS																		
6:15			178	44	222	18:15			174	168	342	Peak Period Volume Peak Hour Peak Volume Peak Hour Factor	00:00	to	12:00															
6:30			235	59	294	18:30			210	173	383																			
6:45			205	76	281	18:45			119	148	267																			
7:00			194	113	307	19:00			113	144	257																			
7:15			205	240	445	19:15			83	233	316	Peak Period Volume Peak Hour Peak Volume Peak Hour Factor	12:00	to	00:00															
7:30			220	253	473	19:30			84	198	282																			
7:45			259	193	452	19:45			74	147	221																			
8:00			242	146	388	20:00			59	111	170																			
8:15			218	127	345	20:15			65	102	167	Peak Period Volume Peak Hour Peak Volume Peak Hour Factor	16:00	to	18:00															
8:30			178	120	298	20:30			60	111	171																			
8:45			175	111	286	20:45			74	70	144																			
9:00			141	106	247	21:00			54	89	143																			
9:15			130	96	226	21:15			55	71	126	Peak Period Volume Peak Hour Peak Volume Peak Hour Factor	07:00	to	09:00															
9:30			146	100	246	21:30			65	65	130																			
9:45			125	121	246	21:45			48	58	106																			
10:00			117	105	222	22:00			47	69	116																			
10:15			108	113	221	22:15			46	38	84	Peak Period Volume Peak Hour Peak Volume Peak Hour Factor	16:00	to	18:00															
10:30			121	110	231	22:30			45	46	91																			
10:45			120	115	235	22:45			39	50	89																			
11:00			119	124	243	23:00			28	67	95																			
11:15			108	136	244	23:15			36	45	81	Peak Period Volume Peak Hour Peak Volume Peak Hour Factor	16:00	to	18:00															
11:30			123	109	232	23:30			28	64	92																			
11:45			143	120	263	23:45			19	39	58																			
TOTALS	0	0	4287	3187	7474	TOTALS	0	0	4822	7213	12035																			
SPLIT %	0%	0%	57%	43%	38%	SPLIT %	0%	0%	40%	60%	62%																			





APPENDIX C – Signal Timing and Phasing Diagrams





Public Works Department

TRAFFIC ENGINEERING DIVISION

2300 W. Commercial Boulevard • Fort Lauderdale, Florida 33309 • 954-847-2600

January 25, 2024

Moshiur Rahman
Calvin, Giordano and Associates
mrahman@cgasolutions.com

Re: Recent Public Records Request #345515

Dear Mr. Rahman:

Broward County acknowledges receiving your public records request on January 25, 2024, for the following public records regarding signal timing details and Standard Operating Procedures (SOPs) for the following intersection located in the City of Hollywood:

- N 35th Avenue and Hayes Street

In accordance with [Chapter 119, Florida Statutes](#), you are permitted to inspect and copy public records in the County's possession that are not exempt and/or confidential.

Your request has been reviewed and we have determined that there is no cost to compile. As such, at this time we are providing these records to you and closing out your request as complete.

Please reference the Public Records Request number above in any future correspondence about this Public Records Request.

Respectfully,

A handwritten signature in blue ink, appearing to read "Catherine Albert", is written over a light blue circular stamp.

Catherine Albert
Traffic Engineering Division
Public Records Request Coordinator



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number 3495 **Initial Operation Date** 07/27/00
Controller Type 2070 LN **System Number**
Modification Number 3 **Modification Date** 02/15/2021
Drawing/Project No **FPL Grid Number** 87372926801
Intersection N 35TH AVE and HOLLYWOOD MEMORIAL ENT.
Municipality HOLLYWOOD

Controller Phase	1	2	3	4	5	6	7	8
Face Number		2,6		4				
Direction		NS		EW				
Initial Green(MIN)		15		10				
Vehicle Ext.(GAP)		2.0		2.0				
Maximum Green I		35		25				
Maximum Green II								
Yellow Clearance		4.0		4.0				
All Red Clearance		2.0		2.0				
Phase Recall		MIN		OFF				
Detector Delay				30-RT				
Walk		7		7				
Pedestrian Clearance		15		12				
Permissive								
Flash Operation		YELLOW		RED				

Attachment

NOTES:

1. FLASH OPERATION 2200-0600, 7 DAYS.
2. MOD. 3 UPDATES ALL RED CLEARANCES.

Submitted By _____

Approved By _____

Station : 3150 - Johnson St & Park Rd (Standard File)

Phase	1 (EL)	2 (WT)	3 (SL)	4 (NT)	5 (WL)	6 (ET)	7 (NL)	8 (ST)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		29		17		29		17								
Min Green	4	10	4	6	4	10	4	6								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	20	45	20	40	20	45	20	40								
Max2																
Yellow Clr	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	1	1	1	1	1	1	1	1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

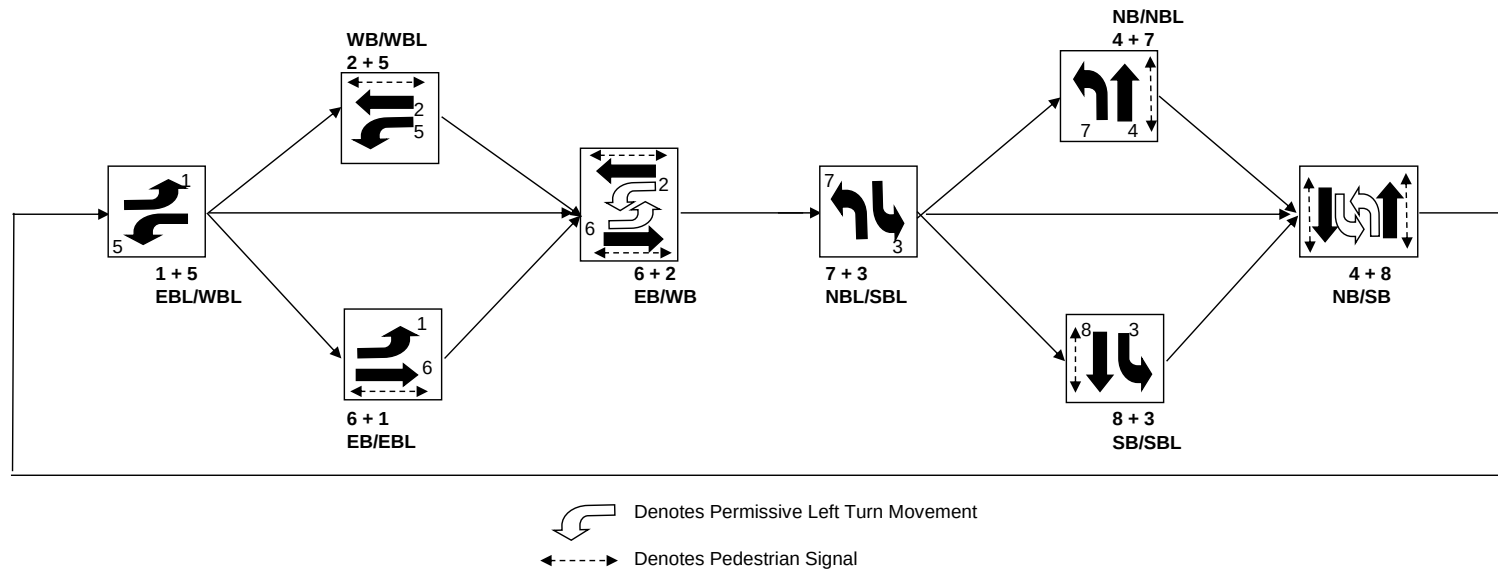
Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON	ON	ON	ON	ON
Override Higher Preempt	ON	ON	ON	ON	ON	ON
Flash in Dwell	ON	ON	ON	ON	ON	ON
Link to Preempt						
Delay						
Min Duration						
Min Green						
Min Walk						
Ped Clear						
Track Green						
Min Dwell						
Max Presence						
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1						
Dwell Cyc Veh 2						
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Sequence of Operation for (3150) Johnson Street and North Park Road





BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	3150	Initial Operation Date	UNKNOWN
Controller Type	2070 LN	System Number	3150
Modification Number	9	Modification Date	05/13/2020
Drawing/Project No	661 - DG 3	FPL Grid Number	87472095100
Intersection	JOHNSON STREET and N PARK ROAD		
Municipality	HOLLYWOOD		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB
Initial Green(MIN)	4	10	4	6	4	10	4	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
Maximum Green I	20	45	20	40	20	45	20	40
Maximum Green II								
Yellow Clearance	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay			5				5	
Walk		7+A		7+A		7+A		7+A
Pedestrian Clearance		29		17		29		17
Permissive	5 SECT		5 SECT		5 SECT		5 SECT	
Flash Operation		YELLOW		RED		YELLOW		RED

Attachment

NOTES:

1. ANTI-BACKDOWN EAST/WEST: PHASES 2+6 ON--->OMIT PHASES 1+5.
2. FLASH OPERATION: 0000-0600, 7 DAYS.
3. AUDIBLE PEDESTRIAN SIGNALS: E/W BEEP, N/S TONE.
4. MOD. 9 UPDATES ALL RED CLEARANCE.

Submitted By _____

Approved By _____

Station : 3151 - Johnson St & N 35 Ave (Standard File)

Phase	1 (EL)	2 (WT)	3 (SL)	4 (NT)	5 (WL)	6 (ET)	7 (NL)	8 (ST)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		18		18		18		20								
Min Green	4	12	4	6	4	12	4	6								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	15	40	15	35	15	40	15	35								
Max2																
Yellow Clr	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

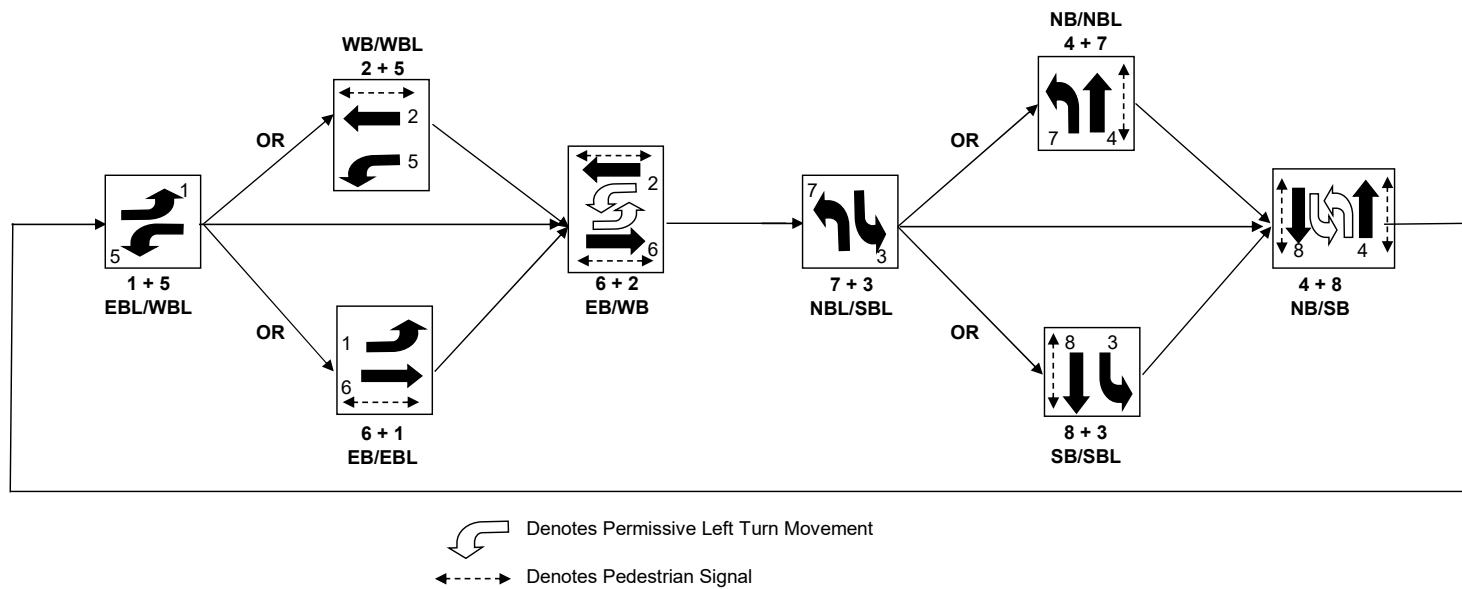
Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green				1		
Min Dwell	8	8	8	8	8	8
Max Presence	180	180	180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	4	2	3	2	4	1
Dwell Cyc Veh 2	8	6	8	5	7	6
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

[illegible][illegible]

Sequence of Operation for (3151), Johnson Street and N 35 Ave Hollywood





BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	3151	Initial Operation Date	UNKNOWN
Controller Type	2070	System Number	3151
Modification Number	8	Modification Date	05/13/2020
Drawing/Project No	06-5705 & 06-5705.19	FPL Grid Number	87372935304
Intersection	JOHNSON STREET and N 35 AVENUE		
Municipality	HOLLYWOOD		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB
Initial Green(MIN)	4	12	4	6	4	12	4	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
Maximum Green I	15	40	15	35	15	40	15	35
Maximum Green II								
Yellow Clearance	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay			5				5	
Walk		7+A		7+A		7+A		7+A
Pedestrian Clearance		18		18		18		20
Permissive	YES		YES		YES		YES	
Flash Operation		YELLOW		RED		YELLOW		RED

Attachment

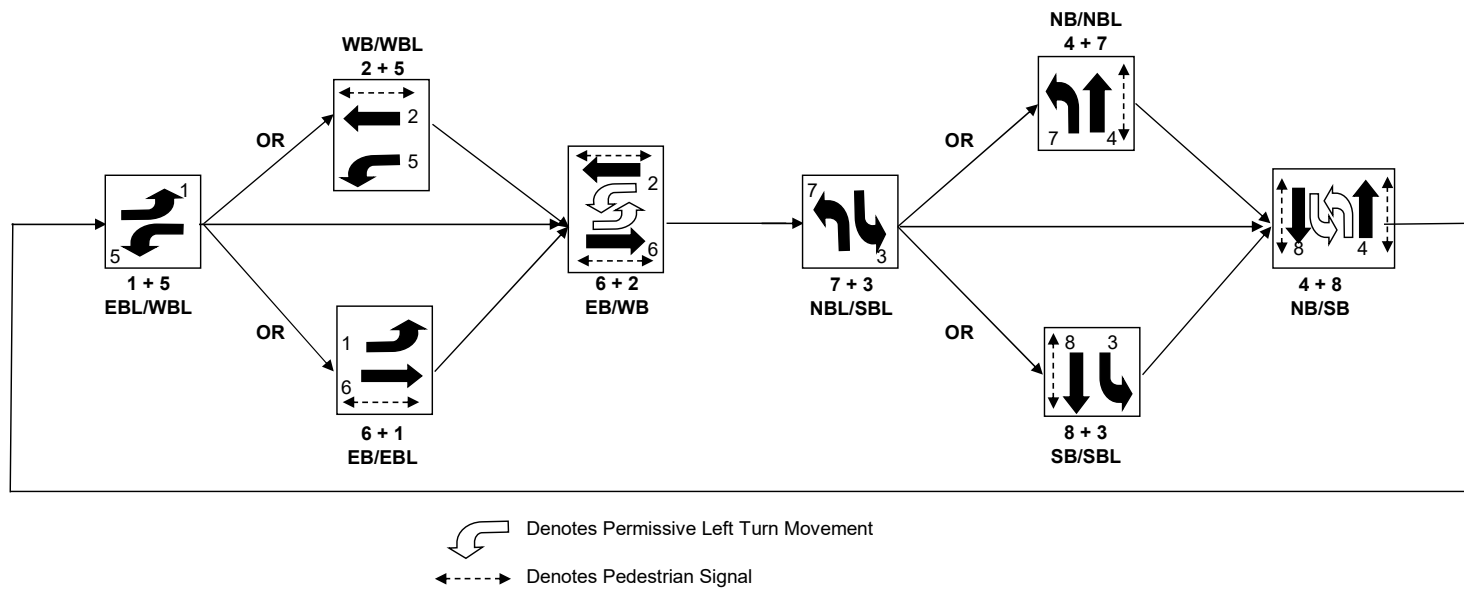
NOTES:

1. ANTI-BACKDOWN EAST/WEST: PHASES 2+6 ON--->OMIT PHASES 1+5.
2. DUAL ENTRY HARDWIRED NORTH/SOUTH.
3. AUDIBLE PEDESTRIAN SIGNALS: E/W BEEP, N/S TONE.
4. MOD. 8 UPDATES ALL RED CLEARANCE.

Submitted By _____

Approved By _____

Sequence of Operation for (3152), Johnson Street and N 46 Ave Hollywood



2320 : 3152 - Johnson St & N 46 Ave (Standard File)

Phase [1.1.1]

	1 (EL)	2 (WT)	3 (SL)	4 (NT)	5 (WL)	6 (ET)	7 (NL)	8 (ST)	9	10	11	12	13	14	15	16
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Ped Clearance	0	24	0	14	0	24	0	14	0	0	0	0	0	0	0	0
Min Green	4	12	4	6	4	12	4	6	0	0	0	0	0	0	0	0
Gap Ext	1.5	3	1.5	3	1.5	3	1.5	3	0	0	0	0	0	0	0	0
Max1	16	50	18	30	16	50	18	30	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Clr	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Phase Option [1.1.2]

	1 (EL)	2 (WT)	3 (SL)	4 (NT)	5 (WL)	6 (ET)	7 (NL)	8 (ST)	9	10	11	12	13	14	15	16
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Rest In Walk		ON				ON										

Detector, Vehicle Parameters 1-16 [5.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	1	2	3	4	5	6	7	8	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Detector, Vehicle Parameters 17-32 [5.1]

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Detector, Vehicle Parameters 33-48 [5.1]

	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Call Phase	0	2	0	4	0	6	0	8	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Detector, Vehicle Parameters 49-64 [5.1]

	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Approved By: osamuels

Date: _____

2320 : 3152 - Johnson St & N 46 Ave (Standard File)

TB Coor, Day Plan[4.4]

Day Plan Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	100															

Day Plan Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	100															

Day Plan Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	100															

Coordination, Pattern 1-16 [2.1]/Coordination, Alt Tables+[2.6]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time																
Offset Time																
Split Number																
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ph Opt Alt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ph Time Alt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Approved By: osamuels

Date: _____

2320 : 3152 - Johnson St & N 46 Ave (Standard File)

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON	ON	ON	ON	ON
Override Higher Preempt	ON	ON	ON	ON	ON	ON
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green						
Min Walk						
Ped Clear						
Track Green						
Min Dwell						
Max Presence						
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1						
Dwell Cyc Veh 2						
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1						
Exit 2						
Exit 3						
Exit 4						

Preemption Times+ [3.4]/Overlaps+ [3.5]/Options+ [3.6]

Preempt	1	2	3	4	5	6
Enable						
Type	EMERG	EMERG	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell						
Pattern						
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1						
Track Over 2						
Track Over 3						
Track Over 4						
Track Over 5						
Track Over 6						
Track Over 7						
Track Over 8						
Track Over 9						
Track Over 10						
Track Over 11						
Track Over 12						
DwellCyc Over 1						
DwellCyc Over 2						
DwellCyc Over 3						
DwellCyc Over 4						
DwellCyc Over 5						
DwellCyc Over 6						
DwellCyc Over 7						
DwellCyc Over 8						
DwellCyc Over 9						
DwellCyc Over 10						
DwellCyc Over 11						
DwellCyc Over 12						
Ped Clear						
Yellow						
Red						
Return Max						

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases										Modifier Phases										Type	Green	Yellow	Red
Overlap 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NORMAL	0	3.5	1.5
Overlap 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NORMAL	0	3.5	1.5
Overlap 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NORMAL	0	3.5	1.5
Overlap 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NORMAL	0	3.5	1.5
Overlap 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NORMAL	0	3.5	1.5
Overlap 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NORMAL	0	3.5	1.5
Overlap 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NORMAL	0	3.5	1.5
Overlap 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NORMAL	0	3.5	1.5

Approved By: osamuels

Date: _____

2320 : 3152 - Johnson St & N 46 Ave (Standard File)

Alternate Phase Program 1, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	
2	0	0	0	0	0	0	0	0	0	
3	0	0	0	0	0	0	0	0	0	
4	0	0	0	0	0	0	0	0	0	
5	0	0	0	0	0	0	0	0	0	
6	0	0	0	0	0	0	0	0	0	
7	0	0	0	0	0	0	0	0	0	
8	0	0	0	0	0	0	0	0	0	

Alternate Phase Programx 2, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	
2	0	0	0	0	0	0	0	0	0	
3	0	0	0	0	0	0	0	0	0	
4	0	0	0	0	0	0	0	0	0	
5	0	0	0	0	0	0	0	0	0	
6	0	0	0	0	0	0	0	0	0	
7	0	0	0	0	0	0	0	0	0	
8	0	0	0	0	0	0	0	0	0	

Alternate Phase Program 3, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	
2	0	0	0	0	0	0	0	0	0	
3	0	0	0	0	0	0	0	0	0	
4	0	0	0	0	0	0	0	0	0	
5	0	0	0	0	0	0	0	0	0	
6	0	0	0	0	0	0	0	0	0	
7	0	0	0	0	0	0	0	0	0	
8	0	0	0	0	0	0	0	0	0	

Alternate Phase Program 4, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear

Alternate Phase Program 5, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear

TB Coor, Day Plan [4.4]

Day Plan Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Approved By: osamuels

Date: _____

2320 : 3152 - Johnson St & N 46 Ave (Standard File)

Coordination, Splits [2.7.1]

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Approved By: osamuels

Date: _____



APPENDIX D – Peak Season Conversion Factor



2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8600 EAST-A1A TO US1

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2022 - 01/01/2022	1.06	1.09
2	01/02/2022 - 01/08/2022	1.05	1.08
3	01/09/2022 - 01/15/2022	1.05	1.08
4	01/16/2022 - 01/22/2022	1.03	1.06
5	01/23/2022 - 01/29/2022	1.01	1.04
* 6	01/30/2022 - 02/05/2022	0.99	1.02
* 7	02/06/2022 - 02/12/2022	0.97	1.00
* 8	02/13/2022 - 02/19/2022	0.95	0.98
* 9	02/20/2022 - 02/26/2022	0.95	0.98
*10	02/27/2022 - 03/05/2022	0.94	0.97
*11	03/06/2022 - 03/12/2022	0.94	0.97
*12	03/13/2022 - 03/19/2022	0.93	0.96
*13	03/20/2022 - 03/26/2022	0.95	0.98
*14	03/27/2022 - 04/02/2022	0.96	0.99
*15	04/03/2022 - 04/09/2022	0.98	1.01
*16	04/10/2022 - 04/16/2022	0.99	1.02
*17	04/17/2022 - 04/23/2022	1.00	1.03
*18	04/24/2022 - 04/30/2022	1.01	1.04
19	05/01/2022 - 05/07/2022	1.02	1.05
20	05/08/2022 - 05/14/2022	1.04	1.07
21	05/15/2022 - 05/21/2022	1.05	1.08
22	05/22/2022 - 05/28/2022	1.04	1.07
23	05/29/2022 - 06/04/2022	1.03	1.06
24	06/05/2022 - 06/11/2022	1.02	1.05
25	06/12/2022 - 06/18/2022	1.02	1.05
26	06/19/2022 - 06/25/2022	1.00	1.03
27	06/26/2022 - 07/02/2022	0.98	1.01
28	07/03/2022 - 07/09/2022	0.97	1.00
29	07/10/2022 - 07/16/2022	0.95	0.98
30	07/17/2022 - 07/23/2022	0.96	0.99
31	07/24/2022 - 07/30/2022	0.97	1.00
32	07/31/2022 - 08/06/2022	0.98	1.01
33	08/07/2022 - 08/13/2022	1.00	1.03
34	08/14/2022 - 08/20/2022	1.01	1.04
35	08/21/2022 - 08/27/2022	1.02	1.05
36	08/28/2022 - 09/03/2022	1.03	1.06
37	09/04/2022 - 09/10/2022	1.05	1.08
38	09/11/2022 - 09/17/2022	1.06	1.09
39	09/18/2022 - 09/24/2022	1.05	1.08
40	09/25/2022 - 10/01/2022	1.04	1.07
41	10/02/2022 - 10/08/2022	1.03	1.06
42	10/09/2022 - 10/15/2022	1.01	1.04
43	10/16/2022 - 10/22/2022	1.03	1.06
44	10/23/2022 - 10/29/2022	1.04	1.07
45	10/30/2022 - 11/05/2022	1.05	1.08
46	11/06/2022 - 11/12/2022	1.07	1.10
47	11/13/2022 - 11/19/2022	1.08	1.11
48	11/20/2022 - 11/26/2022	1.08	1.11
49	11/27/2022 - 12/03/2022	1.07	1.10
50	12/04/2022 - 12/10/2022	1.07	1.10
51	12/11/2022 - 12/17/2022	1.06	1.09
52	12/18/2022 - 12/24/2022	1.05	1.08
53	12/25/2022 - 12/31/2022	1.05	1.08

* PEAK SEASON

23-FEB-2023 09:11:21

830UPD

4_8600_PKSEASON.TXT

2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8601 CEN.-W OF US1 TO SR7

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2022 - 01/01/2022	1.00	1.03
2	01/02/2022 - 01/08/2022	1.01	1.04
3	01/09/2022 - 01/15/2022	1.03	1.06
4	01/16/2022 - 01/22/2022	1.02	1.05
5	01/23/2022 - 01/29/2022	1.00	1.03
6	01/30/2022 - 02/05/2022	0.99	1.02
* 7	02/06/2022 - 02/12/2022	0.98	1.01
* 8	02/13/2022 - 02/19/2022	0.97	1.00
* 9	02/20/2022 - 02/26/2022	0.97	1.00
*10	02/27/2022 - 03/05/2022	0.96	0.99
*11	03/06/2022 - 03/12/2022	0.96	0.99
*12	03/13/2022 - 03/19/2022	0.96	0.99
*13	03/20/2022 - 03/26/2022	0.96	0.99
*14	03/27/2022 - 04/02/2022	0.97	1.00
*15	04/03/2022 - 04/09/2022	0.97	1.00
*16	04/10/2022 - 04/16/2022	0.98	1.01
*17	04/17/2022 - 04/23/2022	0.98	1.01
*18	04/24/2022 - 04/30/2022	0.99	1.02
*19	05/01/2022 - 05/07/2022	0.99	1.02
20	05/08/2022 - 05/14/2022	1.00	1.03
21	05/15/2022 - 05/21/2022	1.00	1.03
22	05/22/2022 - 05/28/2022	1.01	1.04
23	05/29/2022 - 06/04/2022	1.01	1.04
24	06/05/2022 - 06/11/2022	1.02	1.05
25	06/12/2022 - 06/18/2022	1.03	1.06
26	06/19/2022 - 06/25/2022	1.02	1.05
27	06/26/2022 - 07/02/2022	1.02	1.05
28	07/03/2022 - 07/09/2022	1.02	1.05
29	07/10/2022 - 07/16/2022	1.02	1.05
30	07/17/2022 - 07/23/2022	1.02	1.05
31	07/24/2022 - 07/30/2022	1.01	1.04
32	07/31/2022 - 08/06/2022	1.01	1.04
33	08/07/2022 - 08/13/2022	1.00	1.03
34	08/14/2022 - 08/20/2022	1.00	1.03
35	08/21/2022 - 08/27/2022	1.01	1.04
36	08/28/2022 - 09/03/2022	1.02	1.05
37	09/04/2022 - 09/10/2022	1.03	1.06
38	09/11/2022 - 09/17/2022	1.04	1.07
39	09/18/2022 - 09/24/2022	1.03	1.06
40	09/25/2022 - 10/01/2022	1.02	1.05
41	10/02/2022 - 10/08/2022	1.01	1.04
42	10/09/2022 - 10/15/2022	1.00	1.03
43	10/16/2022 - 10/22/2022	1.00	1.03
44	10/23/2022 - 10/29/2022	1.01	1.04
45	10/30/2022 - 11/05/2022	1.01	1.04
46	11/06/2022 - 11/12/2022	1.01	1.04
47	11/13/2022 - 11/19/2022	1.02	1.05
48	11/20/2022 - 11/26/2022	1.01	1.04
49	11/27/2022 - 12/03/2022	1.01	1.04
50	12/04/2022 - 12/10/2022	1.00	1.03
51	12/11/2022 - 12/17/2022	1.00	1.03
52	12/18/2022 - 12/24/2022	1.01	1.04
53	12/25/2022 - 12/31/2022	1.03	1.06

* PEAK SEASON

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2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8630 WEST-W OF US441

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2022 - 01/01/2022	0.99	1.02
2	01/02/2022 - 01/08/2022	1.01	1.04
3	01/09/2022 - 01/15/2022	1.02	1.05
4	01/16/2022 - 01/22/2022	1.01	1.04
5	01/23/2022 - 01/29/2022	1.00	1.03
6	01/30/2022 - 02/05/2022	0.98	1.01
* 7	02/06/2022 - 02/12/2022	0.97	1.00
* 8	02/13/2022 - 02/19/2022	0.96	0.99
* 9	02/20/2022 - 02/26/2022	0.96	0.99
* 10	02/27/2022 - 03/05/2022	0.96	0.99
* 11	03/06/2022 - 03/12/2022	0.96	0.99
* 12	03/13/2022 - 03/19/2022	0.96	0.99
* 13	03/20/2022 - 03/26/2022	0.96	0.99
* 14	03/27/2022 - 04/02/2022	0.97	1.00
* 15	04/03/2022 - 04/09/2022	0.97	1.00
* 16	04/10/2022 - 04/16/2022	0.97	1.00
* 17	04/17/2022 - 04/23/2022	0.97	1.00
* 18	04/24/2022 - 04/30/2022	0.98	1.01
* 19	05/01/2022 - 05/07/2022	0.98	1.01
20	05/08/2022 - 05/14/2022	0.99	1.02
21	05/15/2022 - 05/21/2022	1.00	1.03
22	05/22/2022 - 05/28/2022	1.01	1.04
23	05/29/2022 - 06/04/2022	1.02	1.05
24	06/05/2022 - 06/11/2022	1.03	1.06
25	06/12/2022 - 06/18/2022	1.04	1.07
26	06/19/2022 - 06/25/2022	1.04	1.07
27	06/26/2022 - 07/02/2022	1.05	1.08
28	07/03/2022 - 07/09/2022	1.05	1.08
29	07/10/2022 - 07/16/2022	1.06	1.09
30	07/17/2022 - 07/23/2022	1.05	1.08
31	07/24/2022 - 07/30/2022	1.04	1.07
32	07/31/2022 - 08/06/2022	1.03	1.06
33	08/07/2022 - 08/13/2022	1.02	1.05
34	08/14/2022 - 08/20/2022	1.01	1.04
35	08/21/2022 - 08/27/2022	1.02	1.05
36	08/28/2022 - 09/03/2022	1.02	1.05
37	09/04/2022 - 09/10/2022	1.03	1.06
38	09/11/2022 - 09/17/2022	1.03	1.06
39	09/18/2022 - 09/24/2022	1.02	1.05
40	09/25/2022 - 10/01/2022	1.01	1.04
41	10/02/2022 - 10/08/2022	0.99	1.02
42	10/09/2022 - 10/15/2022	0.98	1.01
43	10/16/2022 - 10/22/2022	0.99	1.02
44	10/23/2022 - 10/29/2022	1.00	1.03
45	10/30/2022 - 11/05/2022	1.00	1.03
46	11/06/2022 - 11/12/2022	1.01	1.04
47	11/13/2022 - 11/19/2022	1.02	1.05
48	11/20/2022 - 11/26/2022	1.01	1.04
49	11/27/2022 - 12/03/2022	1.01	1.04
50	12/04/2022 - 12/10/2022	1.00	1.03
51	12/11/2022 - 12/17/2022	0.99	1.02
52	12/18/2022 - 12/24/2022	1.01	1.04
53	12/25/2022 - 12/31/2022	1.02	1.05

* PEAK SEASON

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2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8659 BROWARD I595

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2022 - 01/01/2022	0.99	1.02
2	01/02/2022 - 01/08/2022	1.02	1.05
3	01/09/2022 - 01/15/2022	1.04	1.07
4	01/16/2022 - 01/22/2022	1.03	1.06
5	01/23/2022 - 01/29/2022	1.01	1.04
6	01/30/2022 - 02/05/2022	1.00	1.03
* 7	02/06/2022 - 02/12/2022	0.98	1.01
* 8	02/13/2022 - 02/19/2022	0.97	1.00
* 9	02/20/2022 - 02/26/2022	0.97	1.00
* 10	02/27/2022 - 03/05/2022	0.97	1.00
* 11	03/06/2022 - 03/12/2022	0.96	0.99
* 12	03/13/2022 - 03/19/2022	0.96	0.99
* 13	03/20/2022 - 03/26/2022	0.96	0.99
* 14	03/27/2022 - 04/02/2022	0.97	1.00
* 15	04/03/2022 - 04/09/2022	0.97	1.00
* 16	04/10/2022 - 04/16/2022	0.97	1.00
* 17	04/17/2022 - 04/23/2022	0.97	1.00
* 18	04/24/2022 - 04/30/2022	0.98	1.01
* 19	05/01/2022 - 05/07/2022	0.98	1.01
20	05/08/2022 - 05/14/2022	0.99	1.02
21	05/15/2022 - 05/21/2022	0.99	1.02
22	05/22/2022 - 05/28/2022	1.00	1.03
23	05/29/2022 - 06/04/2022	1.02	1.05
24	06/05/2022 - 06/11/2022	1.03	1.06
25	06/12/2022 - 06/18/2022	1.04	1.07
26	06/19/2022 - 06/25/2022	1.04	1.07
27	06/26/2022 - 07/02/2022	1.05	1.08
28	07/03/2022 - 07/09/2022	1.05	1.08
29	07/10/2022 - 07/16/2022	1.05	1.08
30	07/17/2022 - 07/23/2022	1.04	1.07
31	07/24/2022 - 07/30/2022	1.03	1.06
32	07/31/2022 - 08/06/2022	1.03	1.06
33	08/07/2022 - 08/13/2022	1.02	1.05
34	08/14/2022 - 08/20/2022	1.01	1.04
35	08/21/2022 - 08/27/2022	1.02	1.05
36	08/28/2022 - 09/03/2022	1.03	1.06
37	09/04/2022 - 09/10/2022	1.03	1.06
38	09/11/2022 - 09/17/2022	1.04	1.07
39	09/18/2022 - 09/24/2022	1.02	1.05
40	09/25/2022 - 10/01/2022	1.00	1.03
41	10/02/2022 - 10/08/2022	0.98	1.01
42	10/09/2022 - 10/15/2022	0.96	0.99
43	10/16/2022 - 10/22/2022	0.97	1.00
44	10/23/2022 - 10/29/2022	0.98	1.01
45	10/30/2022 - 11/05/2022	0.99	1.02
46	11/06/2022 - 11/12/2022	1.00	1.03
47	11/13/2022 - 11/19/2022	1.01	1.04
48	11/20/2022 - 11/26/2022	1.01	1.04
49	11/27/2022 - 12/03/2022	1.00	1.03
50	12/04/2022 - 12/10/2022	1.00	1.03
51	12/11/2022 - 12/17/2022	0.99	1.02
52	12/18/2022 - 12/24/2022	1.02	1.05
53	12/25/2022 - 12/31/2022	1.04	1.07

* PEAK SEASON

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4_8659_PKSEASON.TXT

2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8675 BROWARD I75 URBAN

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2022 - 01/01/2022	0.98	1.01
2	01/02/2022 - 01/08/2022	1.02	1.05
3	01/09/2022 - 01/15/2022	1.05	1.08
4	01/16/2022 - 01/22/2022	1.03	1.06
5	01/23/2022 - 01/29/2022	1.01	1.04
6	01/30/2022 - 02/05/2022	1.00	1.03
* 7	02/06/2022 - 02/12/2022	0.98	1.01
* 8	02/13/2022 - 02/19/2022	0.97	1.00
* 9	02/20/2022 - 02/26/2022	0.97	1.00
*10	02/27/2022 - 03/05/2022	0.97	1.00
*11	03/06/2022 - 03/12/2022	0.97	1.00
*12	03/13/2022 - 03/19/2022	0.97	1.00
*13	03/20/2022 - 03/26/2022	0.97	1.00
*14	03/27/2022 - 04/02/2022	0.97	1.00
*15	04/03/2022 - 04/09/2022	0.97	1.00
*16	04/10/2022 - 04/16/2022	0.97	1.00
*17	04/17/2022 - 04/23/2022	0.98	1.01
*18	04/24/2022 - 04/30/2022	0.98	1.01
*19	05/01/2022 - 05/07/2022	0.99	1.02
20	05/08/2022 - 05/14/2022	0.99	1.02
21	05/15/2022 - 05/21/2022	1.00	1.03
22	05/22/2022 - 05/28/2022	1.01	1.04
23	05/29/2022 - 06/04/2022	1.02	1.05
24	06/05/2022 - 06/11/2022	1.03	1.06
25	06/12/2022 - 06/18/2022	1.04	1.07
26	06/19/2022 - 06/25/2022	1.04	1.07
27	06/26/2022 - 07/02/2022	1.04	1.07
28	07/03/2022 - 07/09/2022	1.05	1.08
29	07/10/2022 - 07/16/2022	1.05	1.08
30	07/17/2022 - 07/23/2022	1.04	1.07
31	07/24/2022 - 07/30/2022	1.03	1.06
32	07/31/2022 - 08/06/2022	1.02	1.05
33	08/07/2022 - 08/13/2022	1.02	1.05
34	08/14/2022 - 08/20/2022	1.01	1.04
35	08/21/2022 - 08/27/2022	1.02	1.05
36	08/28/2022 - 09/03/2022	1.03	1.06
37	09/04/2022 - 09/10/2022	1.03	1.06
38	09/11/2022 - 09/17/2022	1.04	1.07
39	09/18/2022 - 09/24/2022	1.02	1.05
40	09/25/2022 - 10/01/2022	1.00	1.03
41	10/02/2022 - 10/08/2022	0.98	1.01
42	10/09/2022 - 10/15/2022	0.96	0.99
43	10/16/2022 - 10/22/2022	0.97	1.00
44	10/23/2022 - 10/29/2022	0.98	1.01
45	10/30/2022 - 11/05/2022	0.99	1.02
46	11/06/2022 - 11/12/2022	0.99	1.02
47	11/13/2022 - 11/19/2022	1.00	1.03
48	11/20/2022 - 11/26/2022	1.00	1.03
49	11/27/2022 - 12/03/2022	0.99	1.02
50	12/04/2022 - 12/10/2022	0.99	1.02
51	12/11/2022 - 12/17/2022	0.98	1.01
52	12/18/2022 - 12/24/2022	1.02	1.05
53	12/25/2022 - 12/31/2022	1.05	1.08

* PEAK SEASON

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4_8675_PKSEASON.TXT

2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8676 BROWARD I75 RURAL

WEEK	DATES	SF	MOCF: 0.94 PSCF
1	01/01/2022 - 01/01/2022	1.01	1.07
2	01/02/2022 - 01/08/2022	1.01	1.07
3	01/09/2022 - 01/15/2022	1.01	1.07
4	01/16/2022 - 01/22/2022	0.99	1.05
5	01/23/2022 - 01/29/2022	0.97	1.03
* 6	01/30/2022 - 02/05/2022	0.96	1.02
* 7	02/06/2022 - 02/12/2022	0.94	1.00
* 8	02/13/2022 - 02/19/2022	0.92	0.98
* 9	02/20/2022 - 02/26/2022	0.92	0.98
*10	02/27/2022 - 03/05/2022	0.93	0.99
*11	03/06/2022 - 03/12/2022	0.93	0.99
*12	03/13/2022 - 03/19/2022	0.93	0.99
*13	03/20/2022 - 03/26/2022	0.93	0.99
*14	03/27/2022 - 04/02/2022	0.94	1.00
*15	04/03/2022 - 04/09/2022	0.94	1.00
*16	04/10/2022 - 04/16/2022	0.94	1.00
*17	04/17/2022 - 04/23/2022	0.95	1.01
*18	04/24/2022 - 04/30/2022	0.96	1.02
19	05/01/2022 - 05/07/2022	0.97	1.03
20	05/08/2022 - 05/14/2022	0.98	1.04
21	05/15/2022 - 05/21/2022	0.99	1.05
22	05/22/2022 - 05/28/2022	1.01	1.07
23	05/29/2022 - 06/04/2022	1.04	1.11
24	06/05/2022 - 06/11/2022	1.07	1.14
25	06/12/2022 - 06/18/2022	1.10	1.17
26	06/19/2022 - 06/25/2022	1.09	1.16
27	06/26/2022 - 07/02/2022	1.09	1.16
28	07/03/2022 - 07/09/2022	1.08	1.15
29	07/10/2022 - 07/16/2022	1.08	1.15
30	07/17/2022 - 07/23/2022	1.08	1.15
31	07/24/2022 - 07/30/2022	1.07	1.14
32	07/31/2022 - 08/06/2022	1.07	1.14
33	08/07/2022 - 08/13/2022	1.06	1.13
34	08/14/2022 - 08/20/2022	1.06	1.13
35	08/21/2022 - 08/27/2022	1.11	1.18
36	08/28/2022 - 09/03/2022	1.16	1.23
37	09/04/2022 - 09/10/2022	1.20	1.28
38	09/11/2022 - 09/17/2022	1.25	1.33
39	09/18/2022 - 09/24/2022	1.19	1.27
40	09/25/2022 - 10/01/2022	1.13	1.20
41	10/02/2022 - 10/08/2022	1.07	1.14
42	10/09/2022 - 10/15/2022	1.01	1.07
43	10/16/2022 - 10/22/2022	1.01	1.07
44	10/23/2022 - 10/29/2022	1.01	1.07
45	10/30/2022 - 11/05/2022	1.01	1.07
46	11/06/2022 - 11/12/2022	1.01	1.07
47	11/13/2022 - 11/19/2022	1.01	1.07
48	11/20/2022 - 11/26/2022	1.01	1.07
49	11/27/2022 - 12/03/2022	1.01	1.07
50	12/04/2022 - 12/10/2022	1.01	1.07
51	12/11/2022 - 12/17/2022	1.01	1.07
52	12/18/2022 - 12/24/2022	1.01	1.07
53	12/25/2022 - 12/31/2022	1.01	1.07

* PEAK SEASON

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2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8695 BROWARD I95

WEEK	DATES	SF	MOCF: 0.96 PSCF
1	01/01/2022 - 01/01/2022	1.03	1.07
2	01/02/2022 - 01/08/2022	1.03	1.07
3	01/09/2022 - 01/15/2022	1.02	1.06
4	01/16/2022 - 01/22/2022	1.01	1.05
5	01/23/2022 - 01/29/2022	1.00	1.04
6	01/30/2022 - 02/05/2022	0.99	1.03
7	02/06/2022 - 02/12/2022	0.98	1.02
8	02/13/2022 - 02/19/2022	0.97	1.01
* 9	02/20/2022 - 02/26/2022	0.97	1.01
*10	02/27/2022 - 03/05/2022	0.96	1.00
*11	03/06/2022 - 03/12/2022	0.96	1.00
*12	03/13/2022 - 03/19/2022	0.95	0.99
*13	03/20/2022 - 03/26/2022	0.95	0.99
*14	03/27/2022 - 04/02/2022	0.96	1.00
*15	04/03/2022 - 04/09/2022	0.96	1.00
*16	04/10/2022 - 04/16/2022	0.96	1.00
*17	04/17/2022 - 04/23/2022	0.96	1.00
*18	04/24/2022 - 04/30/2022	0.96	1.00
*19	05/01/2022 - 05/07/2022	0.97	1.01
*20	05/08/2022 - 05/14/2022	0.97	1.01
*21	05/15/2022 - 05/21/2022	0.97	1.01
22	05/22/2022 - 05/28/2022	0.99	1.03
23	05/29/2022 - 06/04/2022	1.00	1.04
24	06/05/2022 - 06/11/2022	1.02	1.06
25	06/12/2022 - 06/18/2022	1.03	1.07
26	06/19/2022 - 06/25/2022	1.02	1.06
27	06/26/2022 - 07/02/2022	1.02	1.06
28	07/03/2022 - 07/09/2022	1.01	1.05
29	07/10/2022 - 07/16/2022	1.00	1.04
30	07/17/2022 - 07/23/2022	1.00	1.04
31	07/24/2022 - 07/30/2022	1.00	1.04
32	07/31/2022 - 08/06/2022	0.99	1.03
33	08/07/2022 - 08/13/2022	0.99	1.03
34	08/14/2022 - 08/20/2022	0.99	1.03
35	08/21/2022 - 08/27/2022	1.02	1.06
36	08/28/2022 - 09/03/2022	1.04	1.08
37	09/04/2022 - 09/10/2022	1.07	1.11
38	09/11/2022 - 09/17/2022	1.09	1.14
39	09/18/2022 - 09/24/2022	1.07	1.11
40	09/25/2022 - 10/01/2022	1.04	1.08
41	10/02/2022 - 10/08/2022	1.02	1.06
42	10/09/2022 - 10/15/2022	0.99	1.03
43	10/16/2022 - 10/22/2022	1.00	1.04
44	10/23/2022 - 10/29/2022	1.01	1.05
45	10/30/2022 - 11/05/2022	1.02	1.06
46	11/06/2022 - 11/12/2022	1.03	1.07
47	11/13/2022 - 11/19/2022	1.04	1.08
48	11/20/2022 - 11/26/2022	1.04	1.08
49	11/27/2022 - 12/03/2022	1.04	1.08
50	12/04/2022 - 12/10/2022	1.03	1.07
51	12/11/2022 - 12/17/2022	1.03	1.07
52	12/18/2022 - 12/24/2022	1.03	1.07
53	12/25/2022 - 12/31/2022	1.02	1.06

* PEAK SEASON

23-FEB-2023 09:11:22

830UPD

4_8695_PKSEASON.TXT

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8600 EAST-A1A TO US1

WEEK	DATES	SF	MOCF: 0.92 PSCF
1	01/01/2024 - 01/06/2024	0.99	1.08
2	01/07/2024 - 01/13/2024	0.99	1.08
3	01/14/2024 - 01/20/2024	1.00	1.09
4	01/21/2024 - 01/27/2024	0.98	1.07
5	01/28/2024 - 02/03/2024	0.97	1.05
6	02/04/2024 - 02/10/2024	0.95	1.03
7	02/11/2024 - 02/17/2024	0.94	1.02
* 8	02/18/2024 - 02/24/2024	0.92	1.00
* 9	02/25/2024 - 03/02/2024	0.91	0.99
* 10	03/03/2024 - 03/09/2024	0.89	0.97
* 11	03/10/2024 - 03/16/2024	0.88	0.96
* 12	03/17/2024 - 03/23/2024	0.89	0.97
* 13	03/24/2024 - 03/30/2024	0.90	0.98
* 14	03/31/2024 - 04/06/2024	0.91	0.99
* 15	04/07/2024 - 04/13/2024	0.92	1.00
* 16	04/14/2024 - 04/20/2024	0.93	1.01
* 17	04/21/2024 - 04/27/2024	0.93	1.01
* 18	04/28/2024 - 05/04/2024	0.94	1.02
* 19	05/05/2024 - 05/11/2024	0.94	1.02
* 20	05/12/2024 - 05/18/2024	0.94	1.02
21	05/19/2024 - 05/25/2024	0.98	1.07
22	05/26/2024 - 06/01/2024	1.01	1.10
23	06/02/2024 - 06/08/2024	1.05	1.14
24	06/09/2024 - 06/15/2024	1.08	1.17
25	06/16/2024 - 06/22/2024	1.07	1.16
26	06/23/2024 - 06/29/2024	1.06	1.15
27	06/30/2024 - 07/06/2024	1.05	1.14
28	07/07/2024 - 07/13/2024	1.04	1.13
29	07/14/2024 - 07/20/2024	1.04	1.13
30	07/21/2024 - 07/27/2024	1.05	1.14
31	07/28/2024 - 08/03/2024	1.06	1.15
32	08/04/2024 - 08/10/2024	1.08	1.17
33	08/11/2024 - 08/17/2024	1.09	1.18
34	08/18/2024 - 08/24/2024	1.09	1.18
35	08/25/2024 - 08/31/2024	1.08	1.17
36	09/01/2024 - 09/07/2024	1.08	1.17
37	09/08/2024 - 09/14/2024	1.08	1.17
38	09/15/2024 - 09/21/2024	1.08	1.17
39	09/22/2024 - 09/28/2024	1.07	1.16
40	09/29/2024 - 10/05/2024	1.07	1.16
41	10/06/2024 - 10/12/2024	1.07	1.16
42	10/13/2024 - 10/19/2024	1.07	1.16
43	10/20/2024 - 10/26/2024	1.05	1.14
44	10/27/2024 - 11/02/2024	1.03	1.12
45	11/03/2024 - 11/09/2024	1.02	1.11
46	11/10/2024 - 11/16/2024	1.00	1.09
47	11/17/2024 - 11/23/2024	1.00	1.09
48	11/24/2024 - 11/30/2024	1.00	1.09
49	12/01/2024 - 12/07/2024	0.99	1.08
50	12/08/2024 - 12/14/2024	0.99	1.08
51	12/15/2024 - 12/21/2024	0.99	1.08
52	12/22/2024 - 12/28/2024	0.99	1.08
53	12/29/2024 - 12/31/2024	1.00	1.09

* PEAK SEASON

04-MAR-2025 16:32:53

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2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8601 CEN.-W OF US1 TO SR7

WEEK	DATES	SF	MOCF: 0.99
			PSCF
1	01/01/2024 - 01/06/2024	0.99	1.00
2	01/07/2024 - 01/13/2024	1.01	1.02
3	01/14/2024 - 01/20/2024	1.04	1.05
4	01/21/2024 - 01/27/2024	1.03	1.04
5	01/28/2024 - 02/03/2024	1.02	1.03
6	02/04/2024 - 02/10/2024	1.01	1.02
7	02/11/2024 - 02/17/2024	1.00	1.01
8	02/18/2024 - 02/24/2024	1.00	1.01
9	02/25/2024 - 03/02/2024	1.00	1.01
10	03/03/2024 - 03/09/2024	0.99	1.00
11	03/10/2024 - 03/16/2024	0.99	1.00
12	03/17/2024 - 03/23/2024	0.99	1.00
13	03/24/2024 - 03/30/2024	0.99	1.00
14	03/31/2024 - 04/06/2024	0.99	1.00
15	04/07/2024 - 04/13/2024	0.99	1.00
16	04/14/2024 - 04/20/2024	0.99	1.00
17	04/21/2024 - 04/27/2024	0.99	1.00
18	04/28/2024 - 05/04/2024	1.00	1.01
19	05/05/2024 - 05/11/2024	1.00	1.01
20	05/12/2024 - 05/18/2024	1.00	1.01
21	05/19/2024 - 05/25/2024	1.01	1.02
22	05/26/2024 - 06/01/2024	1.02	1.03
23	06/02/2024 - 06/08/2024	1.03	1.04
24	06/09/2024 - 06/15/2024	1.04	1.05
25	06/16/2024 - 06/22/2024	1.04	1.05
26	06/23/2024 - 06/29/2024	1.04	1.05
27	06/30/2024 - 07/06/2024	1.04	1.05
28	07/07/2024 - 07/13/2024	1.04	1.05
29	07/14/2024 - 07/20/2024	1.04	1.05
30	07/21/2024 - 07/27/2024	1.02	1.03
31	07/28/2024 - 08/03/2024	1.01	1.02
32	08/04/2024 - 08/10/2024	1.00	1.01
33	08/11/2024 - 08/17/2024	0.99	1.00
34	08/18/2024 - 08/24/2024	0.99	1.00
35	08/25/2024 - 08/31/2024	0.99	1.00
36	09/01/2024 - 09/07/2024	1.00	1.01
37	09/08/2024 - 09/14/2024	1.00	1.01
38	09/15/2024 - 09/21/2024	1.00	1.01
*39	09/22/2024 - 09/28/2024	1.00	1.01
*40	09/29/2024 - 10/05/2024	1.00	1.01
*41	10/06/2024 - 10/12/2024	1.00	1.01
*42	10/13/2024 - 10/19/2024	1.00	1.01
*43	10/20/2024 - 10/26/2024	1.00	1.01
*44	10/27/2024 - 11/02/2024	0.99	1.00
*45	11/03/2024 - 11/09/2024	0.99	1.00
*46	11/10/2024 - 11/16/2024	0.99	1.00
*47	11/17/2024 - 11/23/2024	0.99	1.00
*48	11/24/2024 - 11/30/2024	0.99	1.00
*49	12/01/2024 - 12/07/2024	0.99	1.00
*50	12/08/2024 - 12/14/2024	0.99	1.00
*51	12/15/2024 - 12/21/2024	0.99	1.00
52	12/22/2024 - 12/28/2024	1.01	1.02
53	12/29/2024 - 12/31/2024	1.04	1.05

* PEAK SEASON

04-MAR-2025 16:32:53

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2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8630 WEST-W OF US441

WEEK	DATES	SF	MOCF: 0.98 PSCF
1	01/01/2024 - 01/06/2024	1.05	1.07
2	01/07/2024 - 01/13/2024	1.04	1.06
3	01/14/2024 - 01/20/2024	1.02	1.04
4	01/21/2024 - 01/27/2024	1.00	1.02
5	01/28/2024 - 02/03/2024	0.99	1.01
6	02/04/2024 - 02/10/2024	0.98	1.00
* 7	02/11/2024 - 02/17/2024	0.97	0.99
* 8	02/18/2024 - 02/24/2024	0.97	0.99
* 9	02/25/2024 - 03/02/2024	0.97	0.99
*10	03/03/2024 - 03/09/2024	0.97	0.99
*11	03/10/2024 - 03/16/2024	0.97	0.99
*12	03/17/2024 - 03/23/2024	0.97	0.99
*13	03/24/2024 - 03/30/2024	0.98	1.00
*14	03/31/2024 - 04/06/2024	0.98	1.00
*15	04/07/2024 - 04/13/2024	0.99	1.01
*16	04/14/2024 - 04/20/2024	0.99	1.01
*17	04/21/2024 - 04/27/2024	0.99	1.01
*18	04/28/2024 - 05/04/2024	0.98	1.00
*19	05/05/2024 - 05/11/2024	0.98	1.00
20	05/12/2024 - 05/18/2024	0.98	1.00
21	05/19/2024 - 05/25/2024	0.99	1.01
22	05/26/2024 - 06/01/2024	1.00	1.02
23	06/02/2024 - 06/08/2024	1.01	1.03
24	06/09/2024 - 06/15/2024	1.03	1.05
25	06/16/2024 - 06/22/2024	1.03	1.05
26	06/23/2024 - 06/29/2024	1.04	1.06
27	06/30/2024 - 07/06/2024	1.04	1.06
28	07/07/2024 - 07/13/2024	1.05	1.07
29	07/14/2024 - 07/20/2024	1.05	1.07
30	07/21/2024 - 07/27/2024	1.04	1.06
31	07/28/2024 - 08/03/2024	1.03	1.05
32	08/04/2024 - 08/10/2024	1.01	1.03
33	08/11/2024 - 08/17/2024	1.00	1.02
34	08/18/2024 - 08/24/2024	1.00	1.02
35	08/25/2024 - 08/31/2024	1.00	1.02
36	09/01/2024 - 09/07/2024	1.00	1.02
37	09/08/2024 - 09/14/2024	1.00	1.02
38	09/15/2024 - 09/21/2024	1.00	1.02
39	09/22/2024 - 09/28/2024	1.00	1.02
40	09/29/2024 - 10/05/2024	1.00	1.02
41	10/06/2024 - 10/12/2024	1.00	1.02
42	10/13/2024 - 10/19/2024	1.00	1.02
43	10/20/2024 - 10/26/2024	1.00	1.02
44	10/27/2024 - 11/02/2024	1.00	1.02
45	11/03/2024 - 11/09/2024	1.00	1.02
46	11/10/2024 - 11/16/2024	1.00	1.02
47	11/17/2024 - 11/23/2024	1.01	1.03
48	11/24/2024 - 11/30/2024	1.02	1.04
49	12/01/2024 - 12/07/2024	1.03	1.05
50	12/08/2024 - 12/14/2024	1.04	1.06
51	12/15/2024 - 12/21/2024	1.05	1.07
52	12/22/2024 - 12/28/2024	1.04	1.06
53	12/29/2024 - 12/31/2024	1.02	1.04

* PEAK SEASON

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830UPD

4_8630_PKSEASON.TXT

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8659 BROWARD I595

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2024 - 01/06/2024	0.99	1.02
2	01/07/2024 - 01/13/2024	1.00	1.03
3	01/14/2024 - 01/20/2024	1.01	1.04
4	01/21/2024 - 01/27/2024	1.00	1.03
5	01/28/2024 - 02/03/2024	0.99	1.02
6	02/04/2024 - 02/10/2024	0.98	1.01
* 7	02/11/2024 - 02/17/2024	0.97	1.00
* 8	02/18/2024 - 02/24/2024	0.97	1.00
* 9	02/25/2024 - 03/02/2024	0.97	1.00
*10	03/03/2024 - 03/09/2024	0.96	0.99
*11	03/10/2024 - 03/16/2024	0.96	0.99
*12	03/17/2024 - 03/23/2024	0.96	0.99
*13	03/24/2024 - 03/30/2024	0.96	0.99
*14	03/31/2024 - 04/06/2024	0.97	1.00
*15	04/07/2024 - 04/13/2024	0.97	1.00
*16	04/14/2024 - 04/20/2024	0.97	1.00
*17	04/21/2024 - 04/27/2024	0.97	1.00
*18	04/28/2024 - 05/04/2024	0.98	1.01
*19	05/05/2024 - 05/11/2024	0.98	1.01
20	05/12/2024 - 05/18/2024	0.98	1.01
21	05/19/2024 - 05/25/2024	0.99	1.02
22	05/26/2024 - 06/01/2024	1.00	1.03
23	06/02/2024 - 06/08/2024	1.01	1.04
24	06/09/2024 - 06/15/2024	1.02	1.05
25	06/16/2024 - 06/22/2024	1.03	1.06
26	06/23/2024 - 06/29/2024	1.03	1.06
27	06/30/2024 - 07/06/2024	1.04	1.07
28	07/07/2024 - 07/13/2024	1.04	1.07
29	07/14/2024 - 07/20/2024	1.05	1.08
30	07/21/2024 - 07/27/2024	1.05	1.08
31	07/28/2024 - 08/03/2024	1.04	1.07
32	08/04/2024 - 08/10/2024	1.04	1.07
33	08/11/2024 - 08/17/2024	1.03	1.06
34	08/18/2024 - 08/24/2024	1.03	1.06
35	08/25/2024 - 08/31/2024	1.03	1.06
36	09/01/2024 - 09/07/2024	1.03	1.06
37	09/08/2024 - 09/14/2024	1.03	1.06
38	09/15/2024 - 09/21/2024	1.03	1.06
39	09/22/2024 - 09/28/2024	1.03	1.06
40	09/29/2024 - 10/05/2024	1.03	1.06
41	10/06/2024 - 10/12/2024	1.02	1.05
42	10/13/2024 - 10/19/2024	1.02	1.05
43	10/20/2024 - 10/26/2024	1.02	1.05
44	10/27/2024 - 11/02/2024	1.01	1.04
45	11/03/2024 - 11/09/2024	1.01	1.04
46	11/10/2024 - 11/16/2024	1.01	1.04
47	11/17/2024 - 11/23/2024	1.00	1.03
48	11/24/2024 - 11/30/2024	1.00	1.03
49	12/01/2024 - 12/07/2024	1.00	1.03
50	12/08/2024 - 12/14/2024	0.99	1.02
51	12/15/2024 - 12/21/2024	0.99	1.02
52	12/22/2024 - 12/28/2024	1.00	1.03
53	12/29/2024 - 12/31/2024	1.01	1.04

* PEAK SEASON

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830UPD

4_8659_PKSEASON.TXT

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8675 BROWARD I75 URBAN

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2024 - 01/06/2024	0.98	1.01
2	01/07/2024 - 01/13/2024	1.00	1.03
3	01/14/2024 - 01/20/2024	1.03	1.06
4	01/21/2024 - 01/27/2024	1.01	1.04
5	01/28/2024 - 02/03/2024	1.00	1.03
6	02/04/2024 - 02/10/2024	0.99	1.02
* 7	02/11/2024 - 02/17/2024	0.98	1.01
* 8	02/18/2024 - 02/24/2024	0.98	1.01
* 9	02/25/2024 - 03/02/2024	0.97	1.00
*10	03/03/2024 - 03/09/2024	0.97	1.00
*11	03/10/2024 - 03/16/2024	0.97	1.00
*12	03/17/2024 - 03/23/2024	0.97	1.00
*13	03/24/2024 - 03/30/2024	0.97	1.00
*14	03/31/2024 - 04/06/2024	0.97	1.00
*15	04/07/2024 - 04/13/2024	0.97	1.00
*16	04/14/2024 - 04/20/2024	0.97	1.00
*17	04/21/2024 - 04/27/2024	0.98	1.01
*18	04/28/2024 - 05/04/2024	0.98	1.01
*19	05/05/2024 - 05/11/2024	0.98	1.01
20	05/12/2024 - 05/18/2024	0.99	1.02
21	05/19/2024 - 05/25/2024	1.00	1.03
22	05/26/2024 - 06/01/2024	1.01	1.04
23	06/02/2024 - 06/08/2024	1.02	1.05
24	06/09/2024 - 06/15/2024	1.03	1.06
25	06/16/2024 - 06/22/2024	1.03	1.06
26	06/23/2024 - 06/29/2024	1.04	1.07
27	06/30/2024 - 07/06/2024	1.04	1.07
28	07/07/2024 - 07/13/2024	1.05	1.08
29	07/14/2024 - 07/20/2024	1.06	1.09
30	07/21/2024 - 07/27/2024	1.05	1.08
31	07/28/2024 - 08/03/2024	1.04	1.07
32	08/04/2024 - 08/10/2024	1.03	1.06
33	08/11/2024 - 08/17/2024	1.02	1.05
34	08/18/2024 - 08/24/2024	1.02	1.05
35	08/25/2024 - 08/31/2024	1.02	1.05
36	09/01/2024 - 09/07/2024	1.02	1.05
37	09/08/2024 - 09/14/2024	1.02	1.05
38	09/15/2024 - 09/21/2024	1.02	1.05
39	09/22/2024 - 09/28/2024	1.02	1.05
40	09/29/2024 - 10/05/2024	1.02	1.05
41	10/06/2024 - 10/12/2024	1.02	1.05
42	10/13/2024 - 10/19/2024	1.01	1.04
43	10/20/2024 - 10/26/2024	1.01	1.04
44	10/27/2024 - 11/02/2024	1.00	1.03
45	11/03/2024 - 11/09/2024	1.00	1.03
46	11/10/2024 - 11/16/2024	0.99	1.02
47	11/17/2024 - 11/23/2024	0.99	1.02
48	11/24/2024 - 11/30/2024	0.99	1.02
49	12/01/2024 - 12/07/2024	0.98	1.01
50	12/08/2024 - 12/14/2024	0.98	1.01
51	12/15/2024 - 12/21/2024	0.98	1.01
52	12/22/2024 - 12/28/2024	1.00	1.03
53	12/29/2024 - 12/31/2024	1.03	1.06

* PEAK SEASON

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830UPD

4_8675_PKSEASON.TXT

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8676 BROWARD I75 RURAL

WEEK	DATES	SF	MOCF: 0.96	
			PSCF	
1	01/01/2024 - 01/06/2024	0.00	0.00	
2	01/07/2024 - 01/13/2024	0.00	0.00	
3	01/14/2024 - 01/20/2024	1.01	1.05	
4	01/21/2024 - 01/27/2024	0.99	1.03	
* 5	01/28/2024 - 02/03/2024	0.98	1.02	
* 6	02/04/2024 - 02/10/2024	0.97	1.01	
* 7	02/11/2024 - 02/17/2024	0.96	1.00	
* 8	02/18/2024 - 02/24/2024	0.95	0.99	
* 9	02/25/2024 - 03/02/2024	0.95	0.99	
*10	03/03/2024 - 03/09/2024	0.94	0.98	
*11	03/10/2024 - 03/16/2024	0.93	0.97	
*12	03/17/2024 - 03/23/2024	0.94	0.98	
*13	03/24/2024 - 03/30/2024	0.95	0.99	
*14	03/31/2024 - 04/06/2024	0.96	1.00	
*15	04/07/2024 - 04/13/2024	0.97	1.01	
*16	04/14/2024 - 04/20/2024	0.99	1.03	
*17	04/21/2024 - 04/27/2024	0.99	1.03	
18	04/28/2024 - 05/04/2024	1.00	1.04	
19	05/05/2024 - 05/11/2024	1.01	1.05	
20	05/12/2024 - 05/18/2024	1.02	1.06	
21	05/19/2024 - 05/25/2024	1.03	1.07	
22	05/26/2024 - 06/01/2024	1.04	1.08	
23	06/02/2024 - 06/08/2024	1.05	1.09	
24	06/09/2024 - 06/15/2024	1.07	1.11	
25	06/16/2024 - 06/22/2024	1.06	1.10	
26	06/23/2024 - 06/29/2024	1.06	1.10	
27	06/30/2024 - 07/06/2024	1.06	1.10	
28	07/07/2024 - 07/13/2024	1.06	1.10	
29	07/14/2024 - 07/20/2024	1.06	1.10	
30	07/21/2024 - 07/27/2024	1.06	1.10	
31	07/28/2024 - 08/03/2024	1.06	1.10	
32	08/04/2024 - 08/10/2024	1.06	1.10	
33	08/11/2024 - 08/17/2024	1.06	1.10	
34	08/18/2024 - 08/24/2024	1.07	1.11	
35	08/25/2024 - 08/31/2024	1.08	1.13	
36	09/01/2024 - 09/07/2024	1.08	1.13	
37	09/08/2024 - 09/14/2024	1.09	1.14	
38	09/15/2024 - 09/21/2024	1.10	1.15	
39	09/22/2024 - 09/28/2024	1.07	1.11	
40	09/29/2024 - 10/05/2024	1.04	1.08	
41	10/06/2024 - 10/12/2024	1.01	1.05	
42	10/13/2024 - 10/19/2024	0.98	1.02	
43	10/20/2024 - 10/26/2024	0.99	1.03	
44	10/27/2024 - 11/02/2024	0.99	1.03	
45	11/03/2024 - 11/09/2024	1.00	1.04	
46	11/10/2024 - 11/16/2024	1.00	1.04	
47	11/17/2024 - 11/23/2024	1.00	1.04	
48	11/24/2024 - 11/30/2024	1.00	1.04	
49	12/01/2024 - 12/07/2024	1.00	1.04	
50	12/08/2024 - 12/14/2024	1.00	1.04	
51	12/15/2024 - 12/21/2024	1.00	1.04	
52	12/22/2024 - 12/28/2024	1.00	1.04	
53	12/29/2024 - 12/31/2024	1.01	1.05	

* PEAK SEASON

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2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8695 BROWARD I95

WEEK	DATES	SF	MOCF: 0.98 PSCF
1	01/01/2024 - 01/06/2024	1.00	1.02
2	01/07/2024 - 01/13/2024	1.00	1.02
3	01/14/2024 - 01/20/2024	1.00	1.02
4	01/21/2024 - 01/27/2024	1.00	1.02
5	01/28/2024 - 02/03/2024	0.99	1.01
6	02/04/2024 - 02/10/2024	0.99	1.01
7	02/11/2024 - 02/17/2024	0.98	1.00
* 8	02/18/2024 - 02/24/2024	0.98	1.00
* 9	02/25/2024 - 03/02/2024	0.98	1.00
* 10	03/03/2024 - 03/09/2024	0.97	0.99
* 11	03/10/2024 - 03/16/2024	0.97	0.99
* 12	03/17/2024 - 03/23/2024	0.97	0.99
* 13	03/24/2024 - 03/30/2024	0.97	0.99
* 14	03/31/2024 - 04/06/2024	0.98	1.00
* 15	04/07/2024 - 04/13/2024	0.98	1.00
* 16	04/14/2024 - 04/20/2024	0.98	1.00
* 17	04/21/2024 - 04/27/2024	0.98	1.00
* 18	04/28/2024 - 05/04/2024	0.98	1.00
* 19	05/05/2024 - 05/11/2024	0.98	1.00
* 20	05/12/2024 - 05/18/2024	0.98	1.00
21	05/19/2024 - 05/25/2024	0.99	1.01
22	05/26/2024 - 06/01/2024	1.00	1.02
23	06/02/2024 - 06/08/2024	1.01	1.03
24	06/09/2024 - 06/15/2024	1.02	1.04
25	06/16/2024 - 06/22/2024	1.01	1.03
26	06/23/2024 - 06/29/2024	1.01	1.03
27	06/30/2024 - 07/06/2024	1.00	1.02
28	07/07/2024 - 07/13/2024	1.00	1.02
29	07/14/2024 - 07/20/2024	0.99	1.01
30	07/21/2024 - 07/27/2024	1.00	1.02
31	07/28/2024 - 08/03/2024	1.01	1.03
32	08/04/2024 - 08/10/2024	1.01	1.03
33	08/11/2024 - 08/17/2024	1.02	1.04
34	08/18/2024 - 08/24/2024	1.02	1.04
35	08/25/2024 - 08/31/2024	1.02	1.04
36	09/01/2024 - 09/07/2024	1.03	1.05
37	09/08/2024 - 09/14/2024	1.03	1.05
38	09/15/2024 - 09/21/2024	1.03	1.05
39	09/22/2024 - 09/28/2024	1.03	1.05
40	09/29/2024 - 10/05/2024	1.04	1.06
41	10/06/2024 - 10/12/2024	1.04	1.06
42	10/13/2024 - 10/19/2024	1.04	1.06
43	10/20/2024 - 10/26/2024	1.03	1.05
44	10/27/2024 - 11/02/2024	1.03	1.05
45	11/03/2024 - 11/09/2024	1.02	1.04
46	11/10/2024 - 11/16/2024	1.01	1.03
47	11/17/2024 - 11/23/2024	1.01	1.03
48	11/24/2024 - 11/30/2024	1.00	1.02
49	12/01/2024 - 12/07/2024	1.00	1.02
50	12/08/2024 - 12/14/2024	1.00	1.02
51	12/15/2024 - 12/21/2024	1.00	1.02
52	12/22/2024 - 12/28/2024	1.00	1.02
53	12/29/2024 - 12/31/2024	1.00	1.02

* PEAK SEASON

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APPENDIX E – Volume Worksheet



Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
N Park Road & Johnson St	AM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		1	201	472	194	1	102	320	303	0	209	453	93	0	185	405	133
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		1	207	486	200	1	105	330	312	0	215	467	96	0	191	417	137
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		1	222	521	214	1	113	354	335	0	231	501	103	0	205	447	147
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		1	222	521	214	1	113	354	335	0	231	501	103	0	205	447	147
		Total Trip Generation	172																
		Trip Generation In	115																
		Trip Generation Out	57																
		Project Traffic Percent In			6%													22%	
		Project Traffic Percent Out											12%	22%	6%				
		Project Traffic In		0	7	0	0	0	0	0	0	0	0	0	0	0	0	25	0
		Project Traffic Out		0	0	0	0	0	0	0	0	0	7	13	3	0	0	0	0
		Total Project Traffic		0	7	0	0	0	0	0	0	0	7	13	3	0	0	25	0
		Future Total Traffic		1	229	521	214	1	113	354	335	0	238	514	106	0	205	472	147

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
N 35th Ave & Johnson St	AM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		0	228	209	111	0	219	114	50	0	55	430	46	0	112	526	255
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		0	235	215	114	0	226	117	52	0	57	443	47	0	115	542	263
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	252	231	122	0	242	125	56	0	61	475	50	0	123	581	282
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	252	231	122	0	242	125	56	0	61	475	50	0	123	581	282
		Total Trip Generation	172																
		Trip Generation In	115																
		Trip Generation Out	57																
		Project Traffic Percent In			9%	9%												14%	14%
		Project Traffic Percent Out							28%	1%					15%				
		Project Traffic In		0	10	10	0	0	0	0	0	0	0	0	0	0	0	16	16
		Project Traffic Out		0	0	0	0	0	16	1	0	0	0	0	9	0	0	0	0
		Total Project Traffic		0	10	10	0	0	16	1	0	0	0	0	9	0	0	16	16
		Future Total Traffic		0	262	241	122	0	258	126	56	0	61	475	59	0	123	597	298

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
N Park Road & Garfield St.	AM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		0	3	820	3	0	2	738	2	0	3	0	1	0	2	1	7
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		0	3	845	3	0	2	760	2	0	3	0	1	0	2	1	7
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	3	906	3	0	2	815	2	0	3	0	1	0	2	1	8
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	3	906	3	0	2	815	2	0	3	0	1	0	2	1	8
		Total Trip Generation	172																
		Trip Generation In	115																
		Trip Generation Out	57																
		Project Traffic Percent In																	
		Project Traffic Percent Out																	
		Project Traffic In		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Project Traffic Out		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total Project Traffic		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total Traffic		0	3	906	3	0	2	815	2	0	3	0	1	0	2	1	8

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
N 35th Ave & Garfield St.	AM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		18	41	99	3	5	5	245	26	1	16	0	17	0	10	0	1
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		19	42	102	3	5	5	252	27	1	16	0	18	0	10	0	1
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		20	45	109	3	5	5	270	29	1	17	0	19	0	11	0	1
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		20	45	109	3	5	5	270	29	1	17	0	19	0	11	0	1
		Total Trip Generation	172																
		Trip Generation In	115																
		Trip Generation Out	57																
		Project Traffic Percent In								5%									
		Project Traffic Percent Out				5%													
		Project Traffic In		0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
		Project Traffic Out		0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total Project Traffic		0	0	3	0	0	0	6	0	0	0	0	0	0	0	0	0
		Future Total Traffic		20	45	112	3	5	5	276	29	1	17	0	19	0	11	0	1

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
N 35th Ave & MRH Office Center Driveway	AM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		0	337	163	0	0	0	250	42	0	22	0	132	0	0	0	0
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		0	347	168	0	0	0	258	43	0	23	0	136	0	0	0	0
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	372	180	0	0	0	277	46	0	25	0	146	0	0	0	0
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	372	180	0	0	0	277	46	0	25	0	146	0	0	0	0
		Total Trip Generation	172																
		Trip Generation In	115																
		Trip Generation Out	57																
		Project Traffic Percent In			23%					5%									
		Project Traffic Percent Out										5%		30%					
		Project Traffic In		0	26	0	0	0	0	0	6	0	0	0	0	0	0	0	0
		Project Traffic Out		0	0	0	0	0	0	0	0	0	3	0	17	0	0	0	0
		Total Project Traffic		0	26	0	0	0	0	0	6	0	3	0	17	0	0	0	0
		Future Total Traffic		0	398	180	0	0	0	277	52	0	28	0	163	0	0	0	0

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
Johnson St & Adult Emergency Driveway	AM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		0	0	0	0	0	16	0	40	0	124	514	0	0	0	718	127
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		0	0	0	0	0	16	0	41	0	128	529	0	0	0	740	131
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	0	0	0	0	17	0	44	0	137	567	0	0	0	793	140
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	0	0	0	0	17	0	44	0	137	567	0	0	0	793	140
		Total Trip Generation	172																
		Trip Generation In	115																
		Trip Generation Out	57																
		Project Traffic Percent In																14%	9%
		Project Traffic Percent Out						15%											
		Project Traffic In		0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	10
		Project Traffic Out		0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0
		Total Project Traffic		0	0	0	0	0	9	0	0	0	0	0	0	0	0	16	10
		Future Total Traffic		0	0	0	0	0	26	0	44	0	137	567	0	0	0	809	150

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
Johnson St & Employee Parking Garage Driveway	AM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		0	0	0	3	0	0	0	302	0	274	593	24	0	9	523	223
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		0	0	0	3	0	0	0	302	0	274	611	25	0	9	539	230
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	0.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	0	0	3	0	0	0	302	0	274	655	27	0	10	578	230
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	0	0	3	0	0	0	302	0	274	655	27	0	10	578	230
		Total Trip Generation	172																
		Trip Generation In	115																
		Trip Generation Out	57																
		Project Traffic Percent In												50%					
		Project Traffic Percent Out									50%								
Johnson St & N 46th Ave	AM	Count Date	4/16/2025																
		Count Year	2025																
		Existing Year	2025																
		Future Year	2030																
		Raw Count		0	48	416	170	1	159	378	87	0	99	361	32	0	178	334	78
		PSCF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Count Year Peak Season Traffic		0	48	416	170	1	159	378	87	0	99	361	32	0	178	334	78
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	0.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	51	446	182	1	170	405	93	0	106	387	34	0	191	358	84
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	51	446	182	1	170	405	93	0	106	387	34	0	191	358	84
		Total Trip Generation	172																
		Trip Generation In	115																
		Trip Generation Out	57																
		Project Traffic Percent In					18%		18%					14%					
		Project Traffic Percent Out															18%	14%	18%
		Project Traffic In		0	0	0	21	0	21	0	0	0	0	16	0	0	0	0	0
		Project Traffic Out		0	0	0	0	0	0	0	0	0	0	0	0	0	10	8	10
		Total Project Traffic		0	0	0	21	0	21	0	0	0	0	16	0	0	10	8	10
		Future Total Traffic		0	51	446	203	1	191	405	93	0	106	403	34	0	201	366	94

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
N Park Road & Johnson St	PM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		2	107	505	234	0	123	588	227	0	258	433	140	0	199	395	166
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		2	110	520	241	0	127	606	234	0	266	446	144	0	205	407	171
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		2	118	558	258	0	136	650	251	0	285	478	154	0	220	436	183
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		2	118	558	258	0	136	650	251	0	285	478	154	0	220	436	183
		Total Trip Generation	180																
		Trip Generation In	63																
		Trip Generation Out	117																
		Project Traffic Percent In			6%													22%	
		Project Traffic Percent Out												22%	6%				
		Project Traffic In		0	4	0	0	0	0	0	0	0	0	0	0	0	0	14	0
		Project Traffic Out		0	0	0	0	0	0	0	0	0	0	26	7	0	0	0	0
		Total Project Traffic		0	4	0	0	0	0	0	0	0	0	26	7	0	0	14	0
		Future Total Traffic		2	122	558	258	0	136	650	251	0	285	504	161	0	220	450	183

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
N 35th Ave & Johnson St	PM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		0	71	62	105	0	310	172	110	0	39	393	108	0	147	454	126
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		0	73	64	108	0	319	177	113	0	40	405	111	0	151	468	130
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	78	69	116	0	342	190	121	0	43	434	119	0	162	502	139
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	78	69	116	0	342	190	121	0	43	434	119	0	162	502	139
		Total Trip Generation	180																
		Trip Generation In	63																
		Trip Generation Out	117																
		Project Traffic Percent In			10%	8%												14%	14%
		Project Traffic Percent Out							27%	2%					15%				
		Project Traffic In		0	6	5	0	0	0	0	0	0	0	0	0	0	0	9	9
		Project Traffic Out		0	0	0	0	0	32	2	0	0	0	0	18	0	0	0	0
		Total Project Traffic		0	6	5	0	0	32	2	0	0	0	0	18	0	0	9	9
		Future Total Traffic		0	84	74	116	0	374	192	121	0	43	434	137	0	162	511	148

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
N Park Road & Garfield St.	PM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		0	2	925	2	1	5	929	5	0	5	1	5	0	0	0	3
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		0	2	953	2	1	5	957	5	0	5	1	5	0	0	0	3
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	2	1022	2	1	5	1026	5	0	5	1	5	0	0	0	3
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	2	1022	2	1	5	1026	5	0	5	1	5	0	0	0	3
		Total Trip Generation	180																
		Trip Generation In	63																
		Trip Generation Out	117																
		Project Traffic Percent In																	
		Project Traffic Percent Out																	
		Project Traffic In		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Project Traffic Out		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total Project Traffic		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total Traffic		0	2	1022	2	1	5	1026	5	0	5	1	5	0	0	0	3

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
N 35th Ave & Garfield St.	PM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		19	19	122	1	1	3	198	9	0	86	1	81	0	23	2	11
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		20	20	126	1	1	3	204	9	0	89	1	83	0	24	2	11
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		21	21	135	1	1	3	219	10	0	95	1	89	0	26	2	12
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		21	21	135	1	1	3	219	10	0	95	1	89	0	26	2	12
		Total Trip Generation	180																
		Trip Generation In	63																
		Trip Generation Out	117																
		Project Traffic Percent In								5%									
		Project Traffic Percent Out																	
		Project Traffic In		0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
		Project Traffic Out		0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total Project Traffic		0	0	6	0	0	0	3	0	0	0	0	0	0	0	0	0
		Future Total Traffic		21	21	141	1	1	3	222	10	0	95	1	89	0	26	2	12

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
N 35th Ave & MRH Office Center Driveway	PM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		0	111	113	0	0	0	296	29	1	49	0	285	0	0	0	0
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		0	114	116	0	0	0	305	30	1	50	0	294	0	0	0	0
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	122	124	0	0	0	327	32	1	54	0	315	0	0	0	0
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	122	124	0	0	0	327	32	1	54	0	315	0	0	0	0
		Total Trip Generation	180																
		Trip Generation In	63																
		Trip Generation Out	117																
		Project Traffic Percent In			22%					5%									
		Project Traffic Percent Out											5%		30%				
		Project Traffic In		0	14	0	0	0	0	0	3	0	0	0	0	0	0	0	0
		Project Traffic Out		0	0	0	0	0	0	0	0	0	6	0	35	0	0	0	0
		Total Project Traffic		0	14	0	0	0	0	0	3	0	6	0	35	0	0	0	0
		Future Total Traffic		0	136	124	0	0	0	327	35	1	60	0	350	0	0	0	0

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
Johnson St & Adult Emergency Driveway	PM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		0	0	0	0	0	45	0	108	0	60	474	0	1	0	666	53
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		0	0	0	0	0	46	0	111	0	62	488	0	1	0	686	55
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	0	0	0	0	49	0	119	0	66	523	0	1	0	735	59
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	0	0	0	0	49	0	119	0	66	523	0	1	0	735	59
		Total Trip Generation	180																
		Trip Generation In	63																
		Trip Generation Out	117																
		Project Traffic Percent In																14%	10%
		Project Traffic Percent Out							15%										
		Project Traffic In		0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	6
		Project Traffic Out		0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0
		Total Project Traffic		0	0	0	0	0	18	0	0	0	0	0	0	0	0	9	6
		Future Total Traffic		0	0	0	0	0	67	0	119	0	66	523	0	1	0	744	65

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
Johnson St & Employee Parking Garage Driveway	PM	Count Date	12/6/2023																
		Count Year	2023																
		Existing Year	2023																
		Future Year	2030																
		Raw Count		0	2	0	56	0	0	0	461	0	8	475	5	1	7	696	10
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		0	2	0	58	0	0	0	461	0	8	489	5	1	7	717	10
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	2	0	62	0	0	0	461	0	8	524	5	1	8	769	10
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	2	0	62	0	0	0	461	0	8	524	5	1	8	769	10
		Total Trip Generation	180																
		Trip Generation In	63																
		Trip Generation Out	117																
		Project Traffic Percent In											50%						
		Project Traffic Percent Out									50%								
		Project Traffic In		0	0	0	0	0	0	0	0	0	32	0	0	0	0	0	0
		Project Traffic Out		0	0	0	0	0	0	0	59	0	0	0	0	0	0	0	0
		Total Project Traffic		0	0	0	0	0	0	0	59	0	32	0	0	0	0	0	0
		Future Total Traffic		0	2	0	62	0	0	0	520	0	40	524	5	1	8	769	10
Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR
Johnson St & N 46th Ave	PM	Count Date	4/16/2025																
		Count Year	2025																
		Existing Year	2025																
		Future Year	2030																
		Raw Count		0	48	403	54	0	66	393	61	0	47	315	45	0	158	499	102
		PSCF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Count Year Peak Season Traffic		0	48	403	54	0	66	393	61	0	47	315	45	0	158	499	102
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	51	432	58	0	71	421	65	0	50	338	48	0	169	535	109
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	51	432	58	0	71	421	65	0	50	338	48	0	169	535	109
		Total Trip Generation	180																
		Trip Generation In	63																
		Trip Generation Out	117																
		Project Traffic Percent In					18%		18%					14%					
		Project Traffic Percent Out														18%	14%	18%	
		Project Traffic In		0	0	0	11	0	11	0	0	0	0	9	0	0	0	0	0
		Project Traffic Out		0	0	0	0	0	0	0	0	0	0	0	0	0	21	16	21
		Total Project Traffic		0	0	0	11	0	11	0	0	0	0	9	0	0	21	16	21
		Future Total Traffic		0	51	432	69	0	82	421	65	0	50	347	48	0	190	551	130



APPENDIX F – Growth Rate



Growth Rate Calculation

Year	Johnson St #	S 35 Ave (& Johnson ST) # 9472	N Park road # 9622	Avg Growth Rate
2018	15400	9400	18100	
2019	15400	9400	18100	
2020	12000	6800	12500	
2021	12000	6800	12500	
2022	12000	6800	12300	
Growth Rate	-12.37%	-7.11%	-7.98%	-9.15%



APPENDIX G – Trip Generation excerpts from ITE Manual



Land Use: 610 Hospital

Description

A hospital is any institution where medical or surgical care and overnight accommodations are provided to non-ambulatory and ambulatory patients. In this context, the term “hospital” does not refer to a medical clinic (a facility that provides diagnoses and outpatient care only) or a nursing home (a facility devoted to the care of persons unable to care for themselves), which are covered elsewhere in this report. Clinic (Land Use 630) and free-standing emergency room (Land Use 650) are related uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The average numbers of person trips per vehicle trip at the four general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.6 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.6 during Weekday, AM Peak Hour of Generator
- 1.7 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.7 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Maryland, New Jersey, New York, Pennsylvania, Texas, and Washington.

Source Numbers

112, 186, 253, 262, 423, 429, 533, 573, 591, 601, 630, 719, 749, 878, 901, 904, 908, 909, 971, 1018

Hospital (610)

Vehicle Trip Ends vs: Beds
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 4

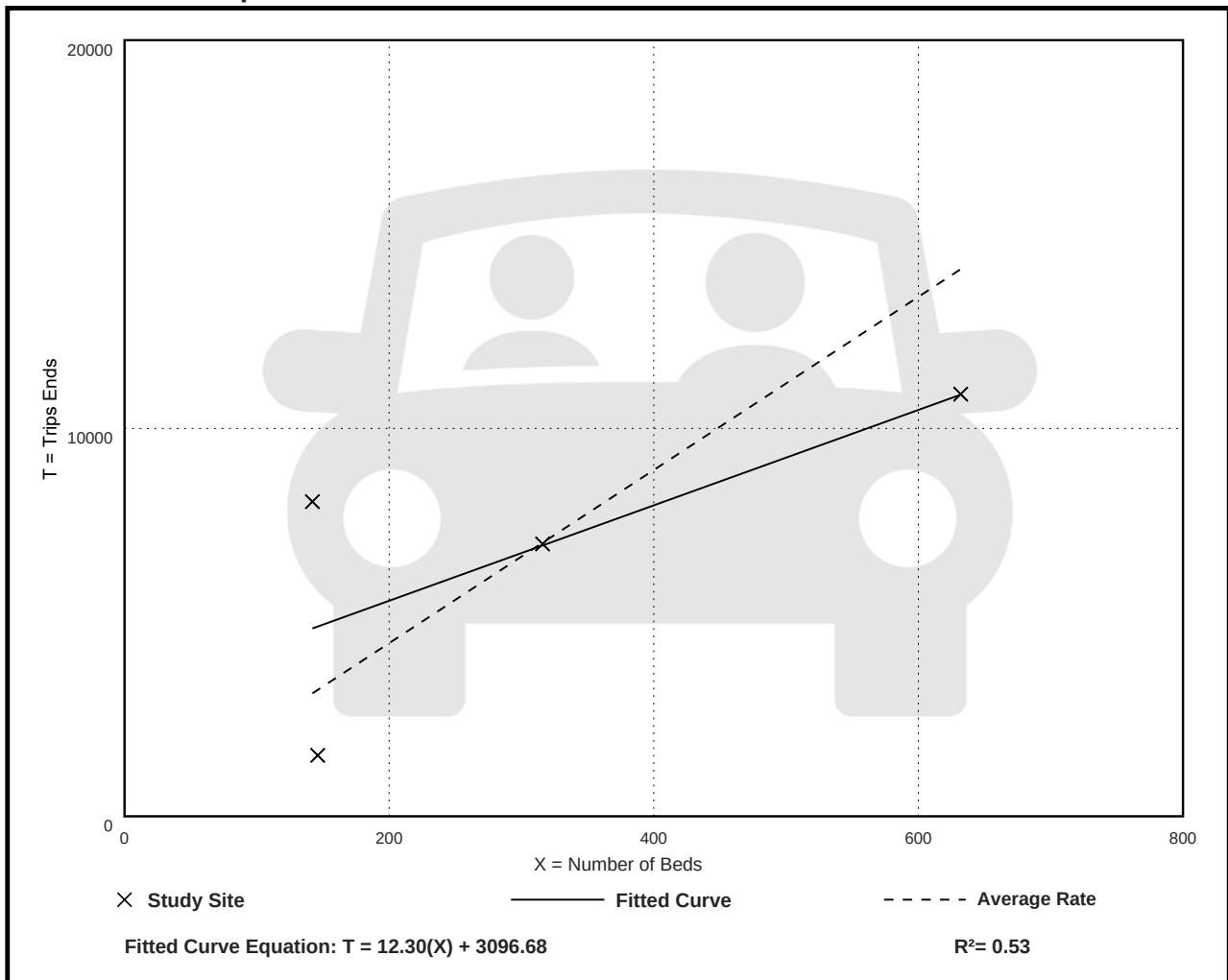
Avg. Num. of Beds: 309

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
22.32	10.77 - 57.13	14.98

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Beds

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 8

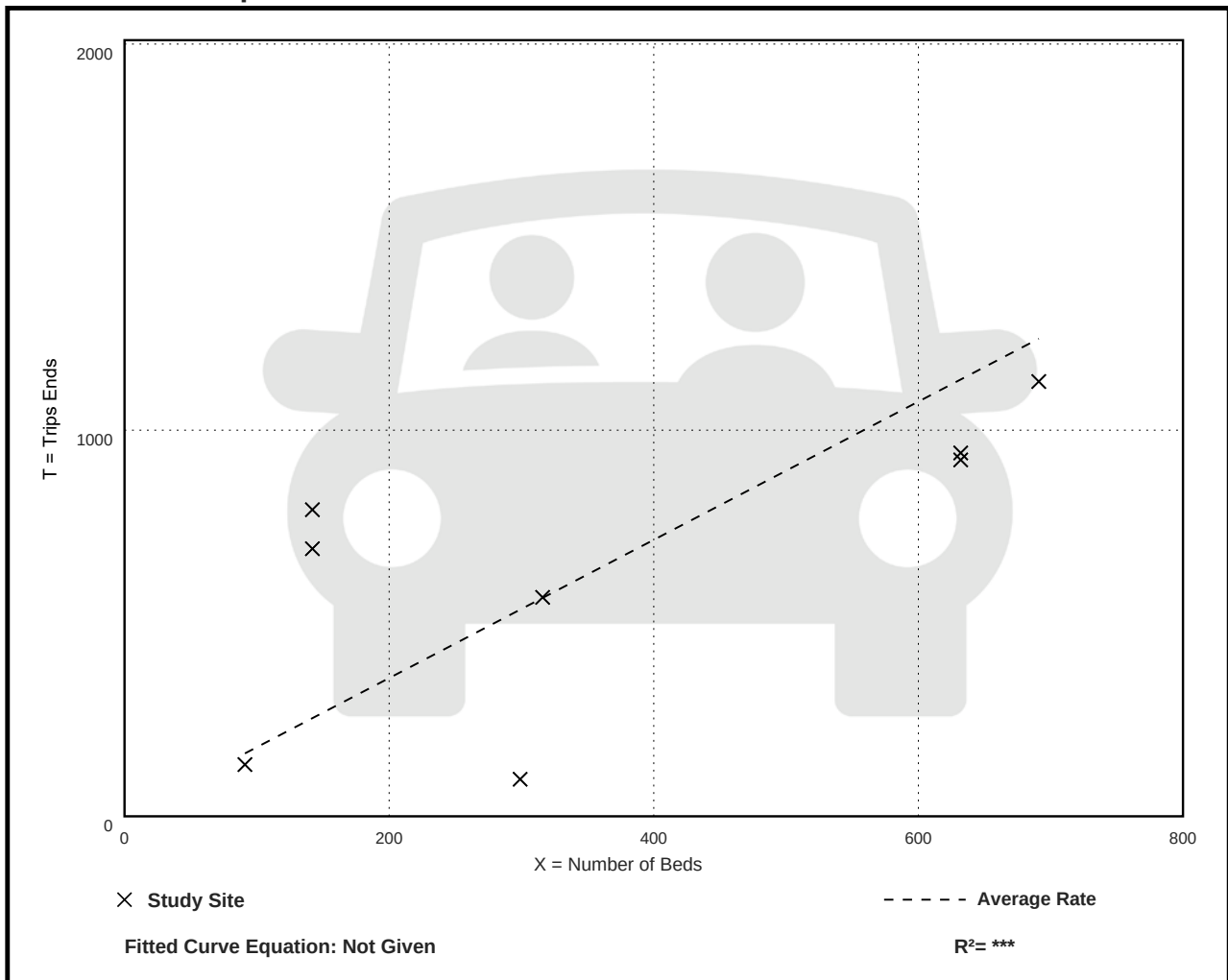
Avg. Num. of Beds: 368

Directional Distribution: 72% entering, 28% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
1.79	0.32 - 5.59	1.28

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Beds

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 6

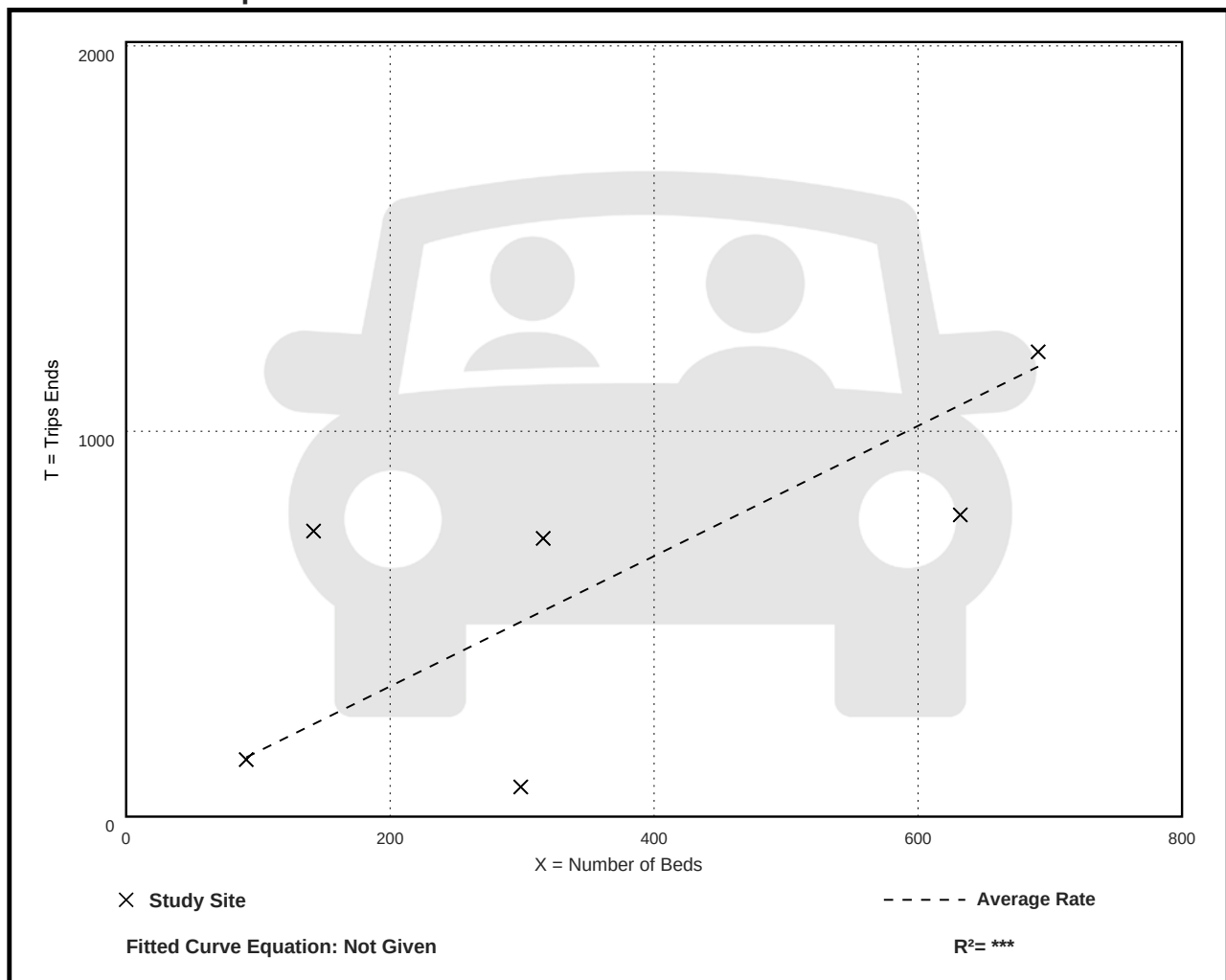
Avg. Num. of Beds: 362

Directional Distribution: 33% entering, 67% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
1.69	0.26 - 5.22	1.20

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Beds

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 7

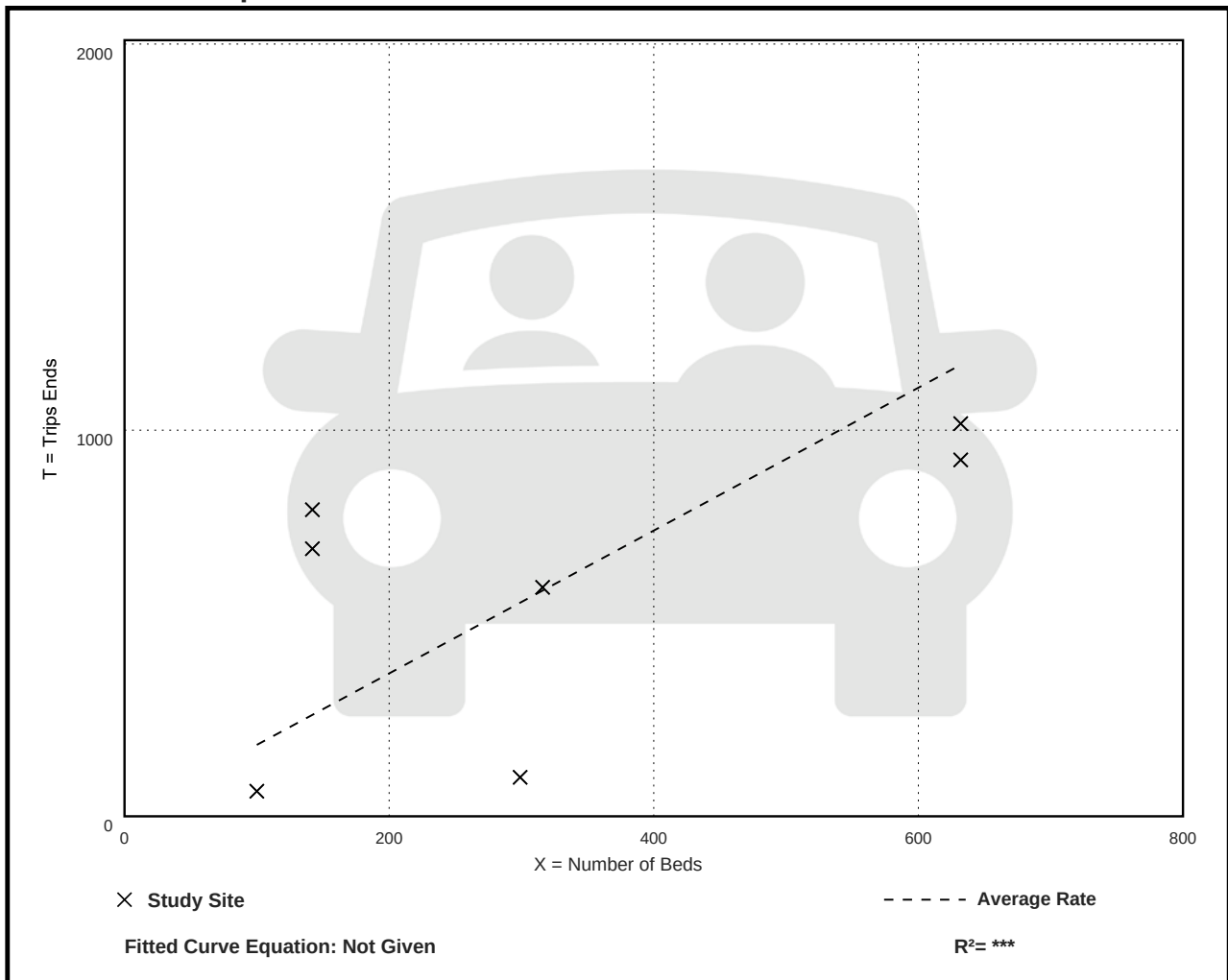
Avg. Num. of Beds: 323

Directional Distribution: 69% entering, 31% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
1.85	0.34 - 5.59	1.48

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Beds

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 10

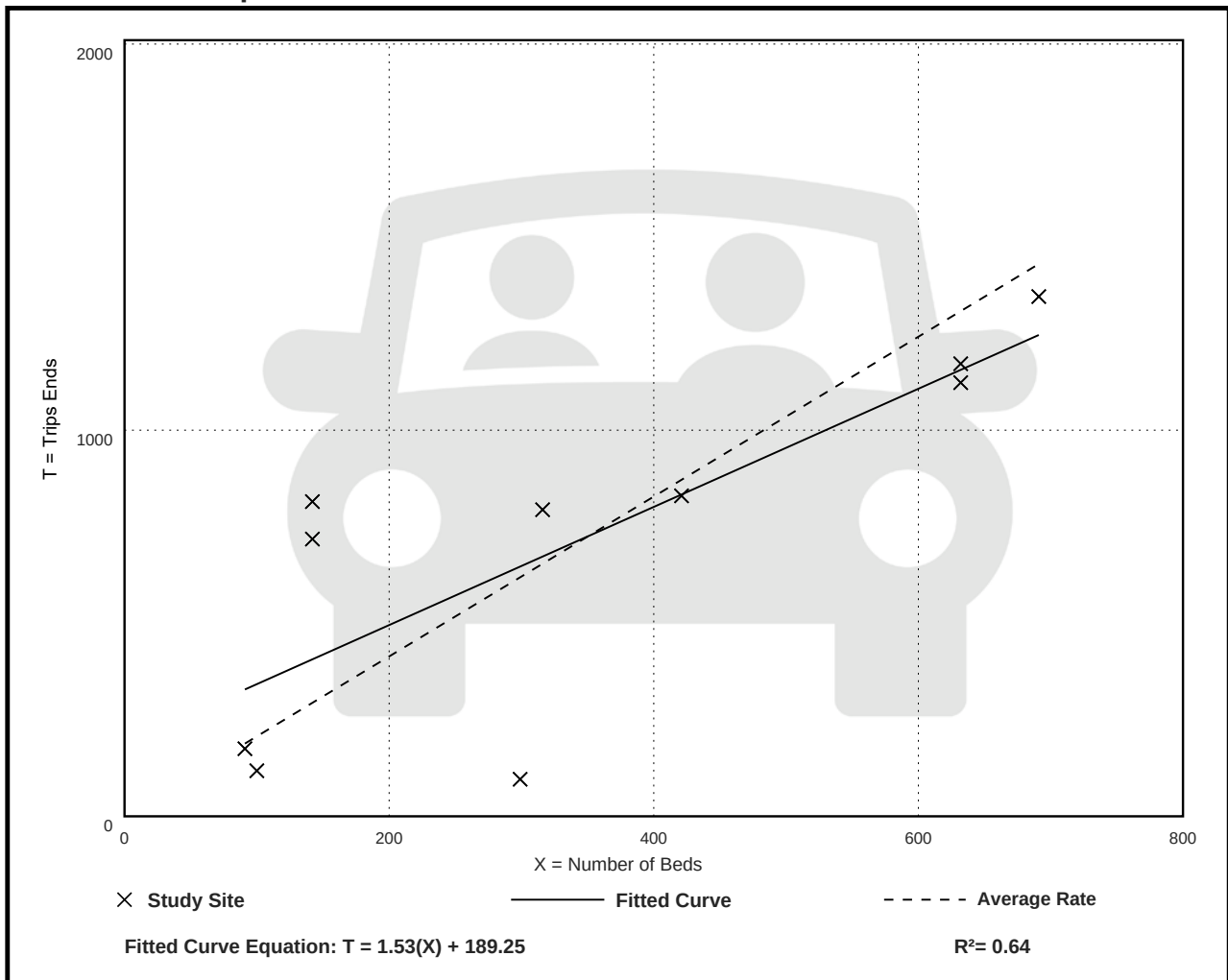
Avg. Num. of Beds: 347

Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
2.07	0.32 - 5.74	1.18

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Beds

On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Beds: 316

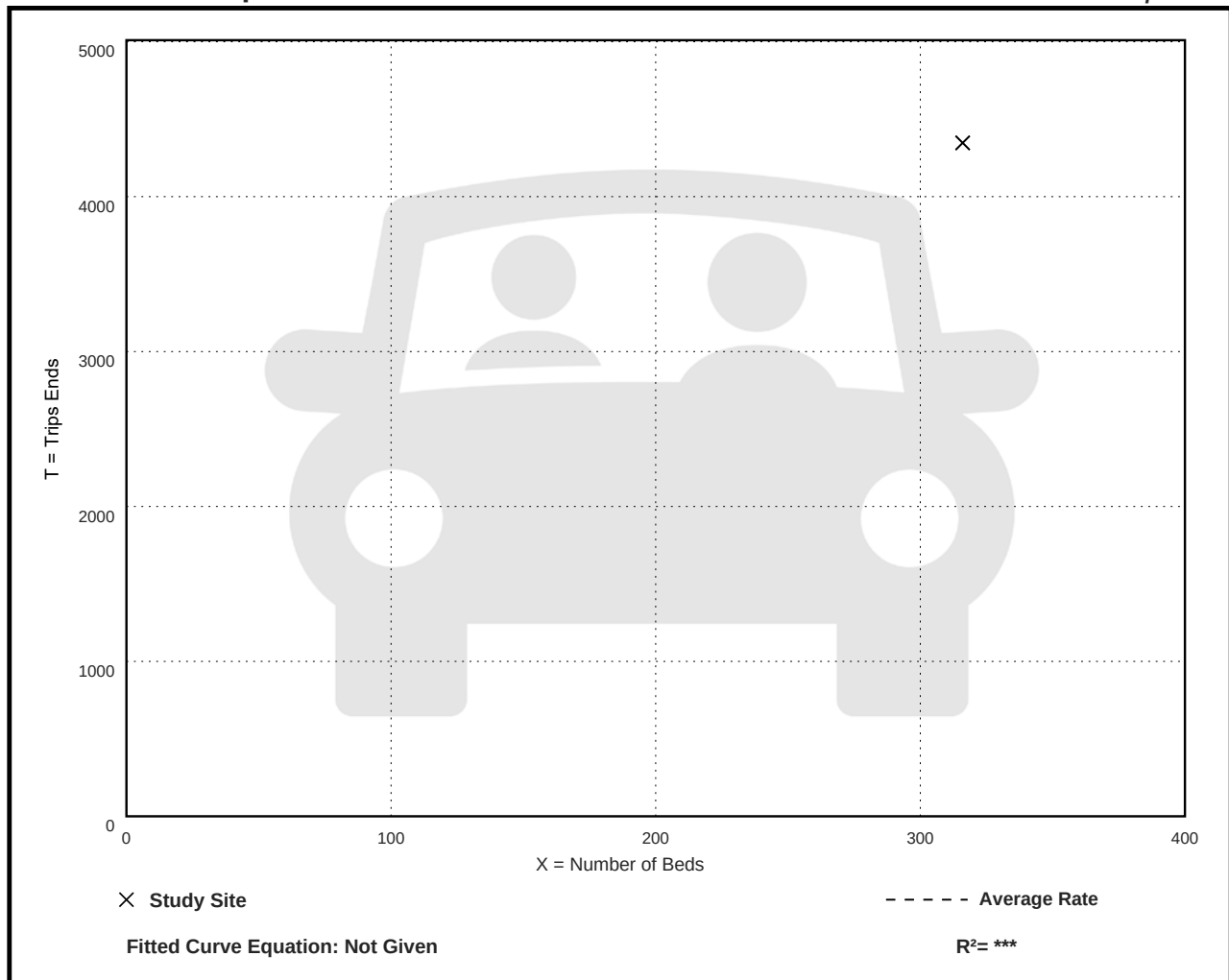
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
13.76	13.76 - 13.76	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: Beds

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Beds: 316

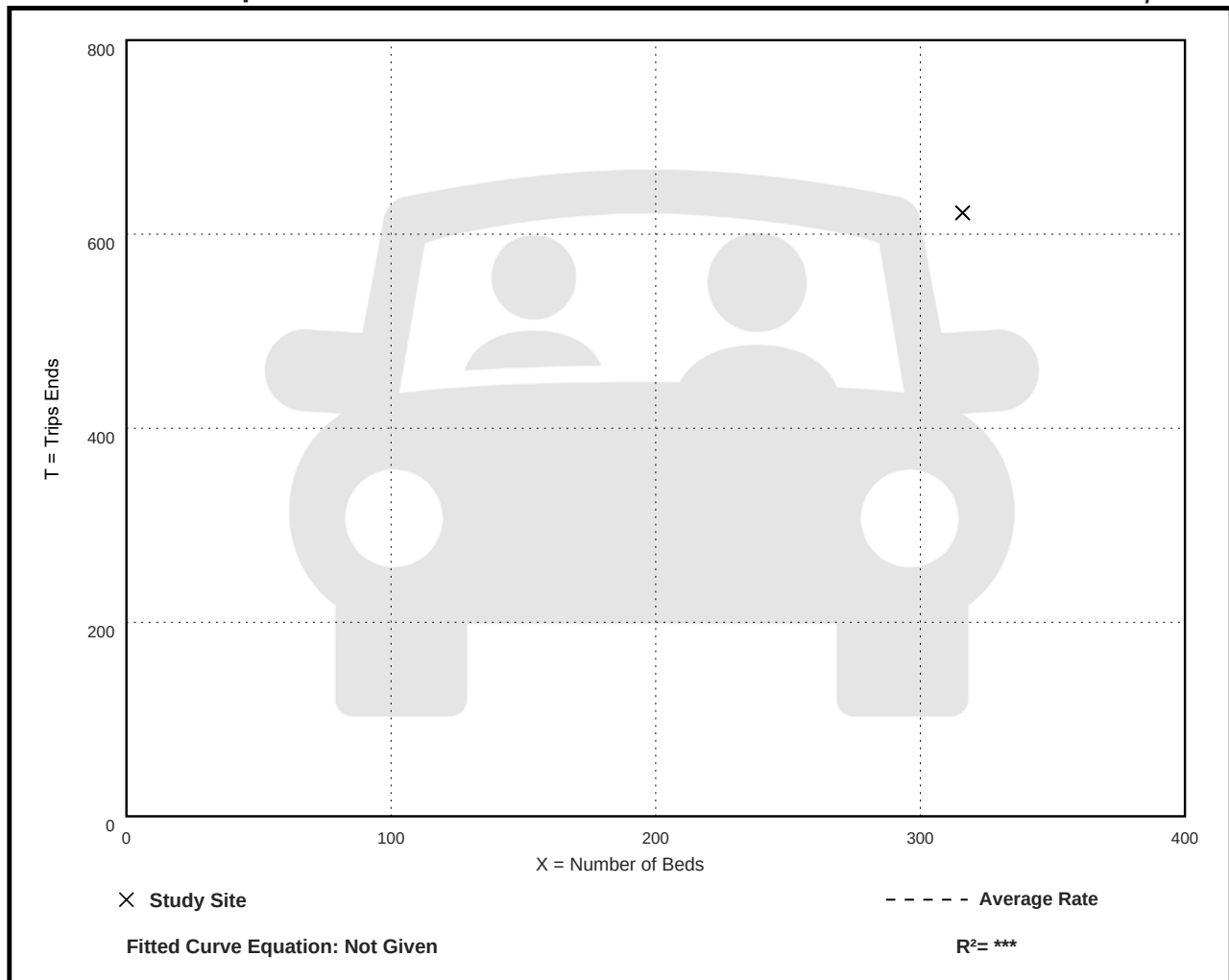
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
1.97	1.97 - 1.97	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: Beds
On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Beds: 316

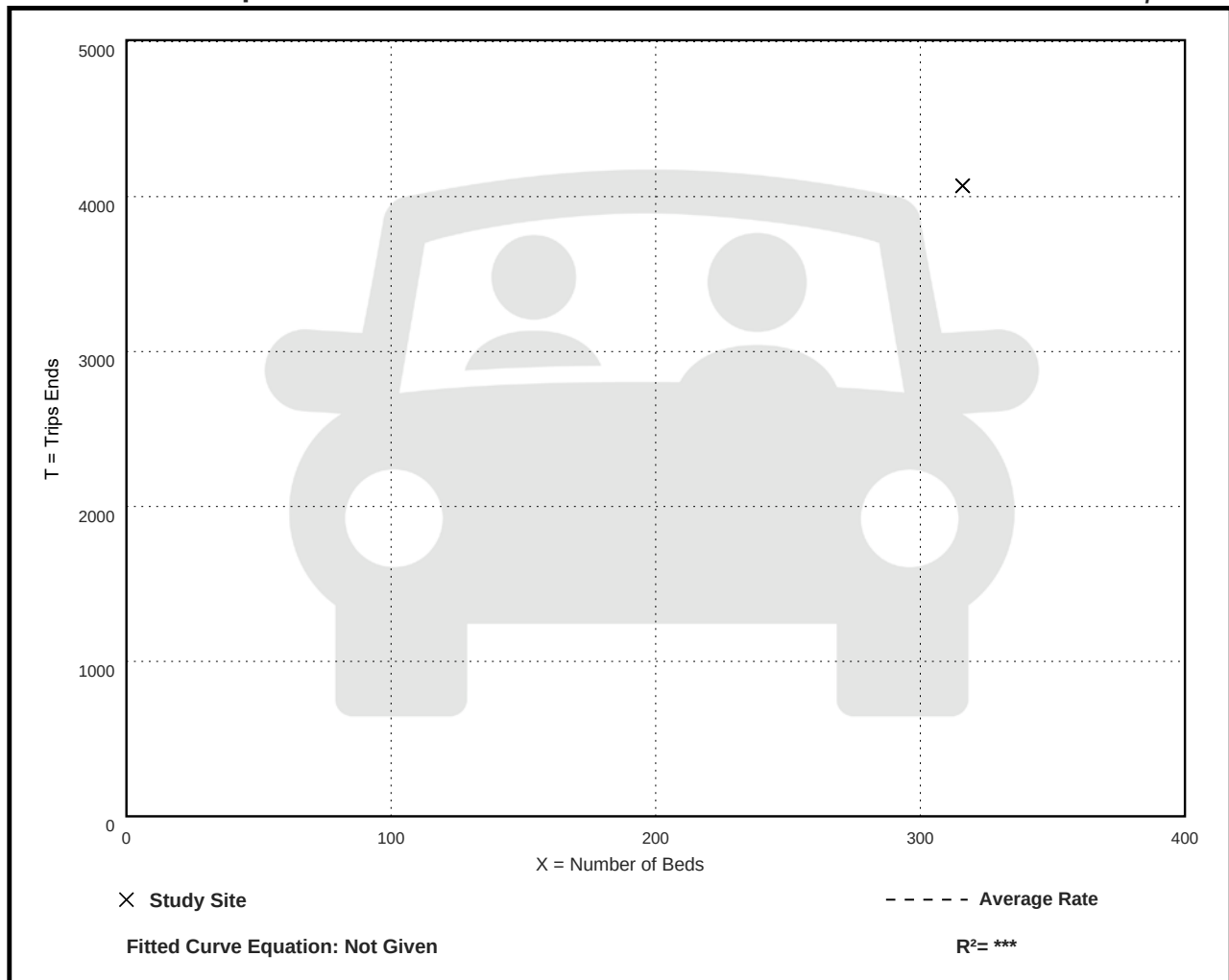
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
12.88	12.88 - 12.88	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: Beds

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Beds: 316

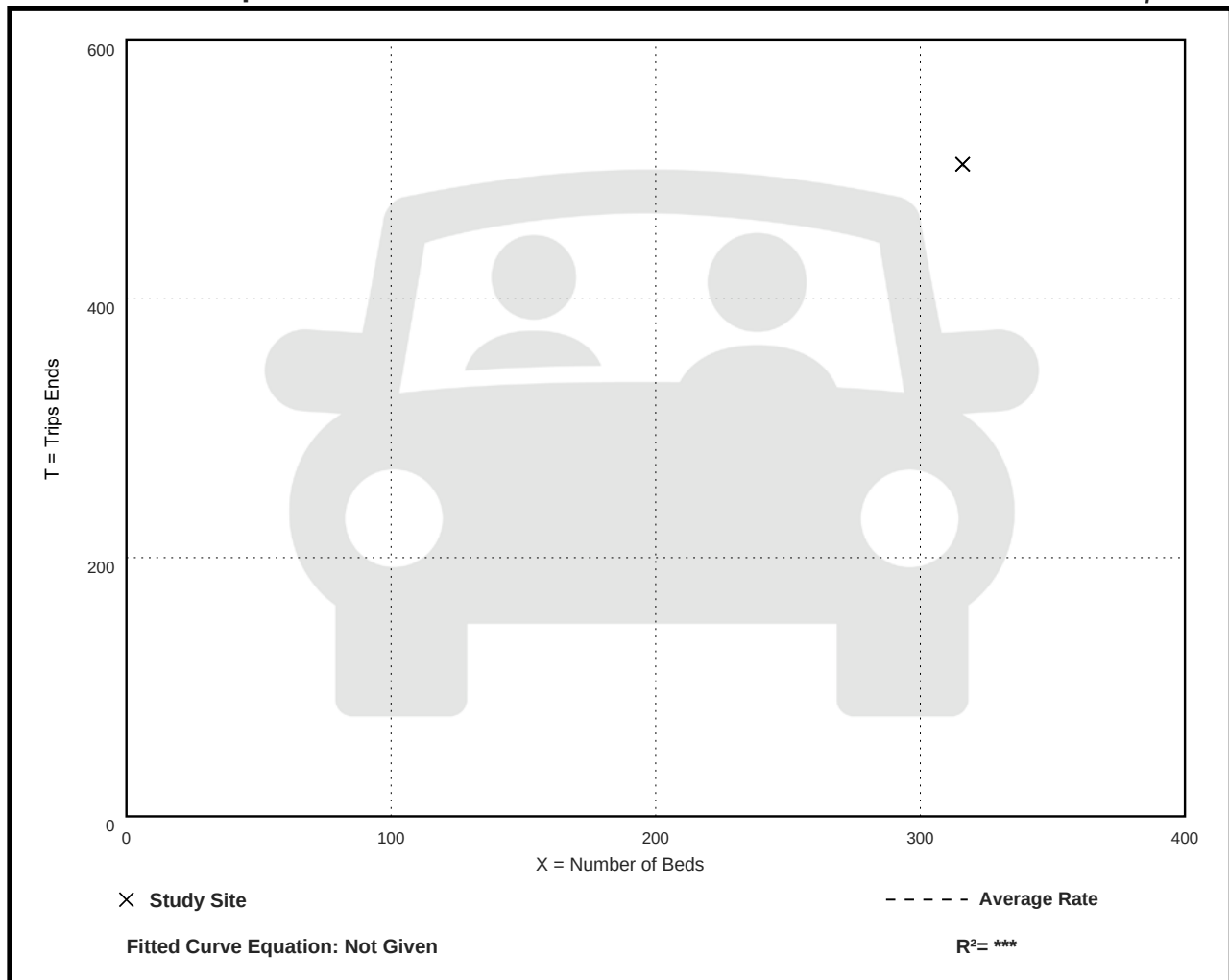
Directional Distribution: 45% entering, 55% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
1.59	1.59 - 1.59	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 7

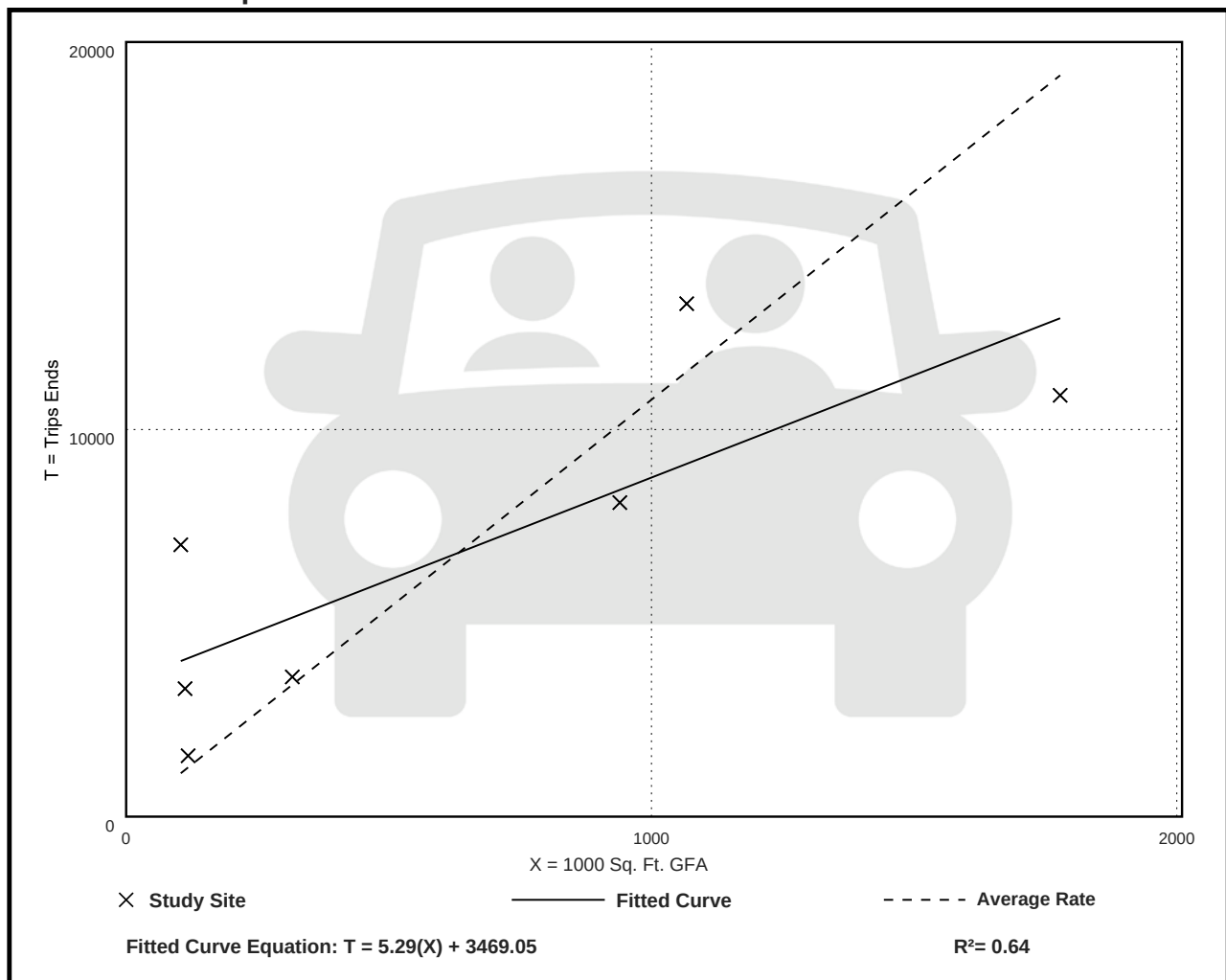
Avg. 1000 Sq. Ft. GFA: 634

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.77	6.12 - 67.52	10.52

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 19

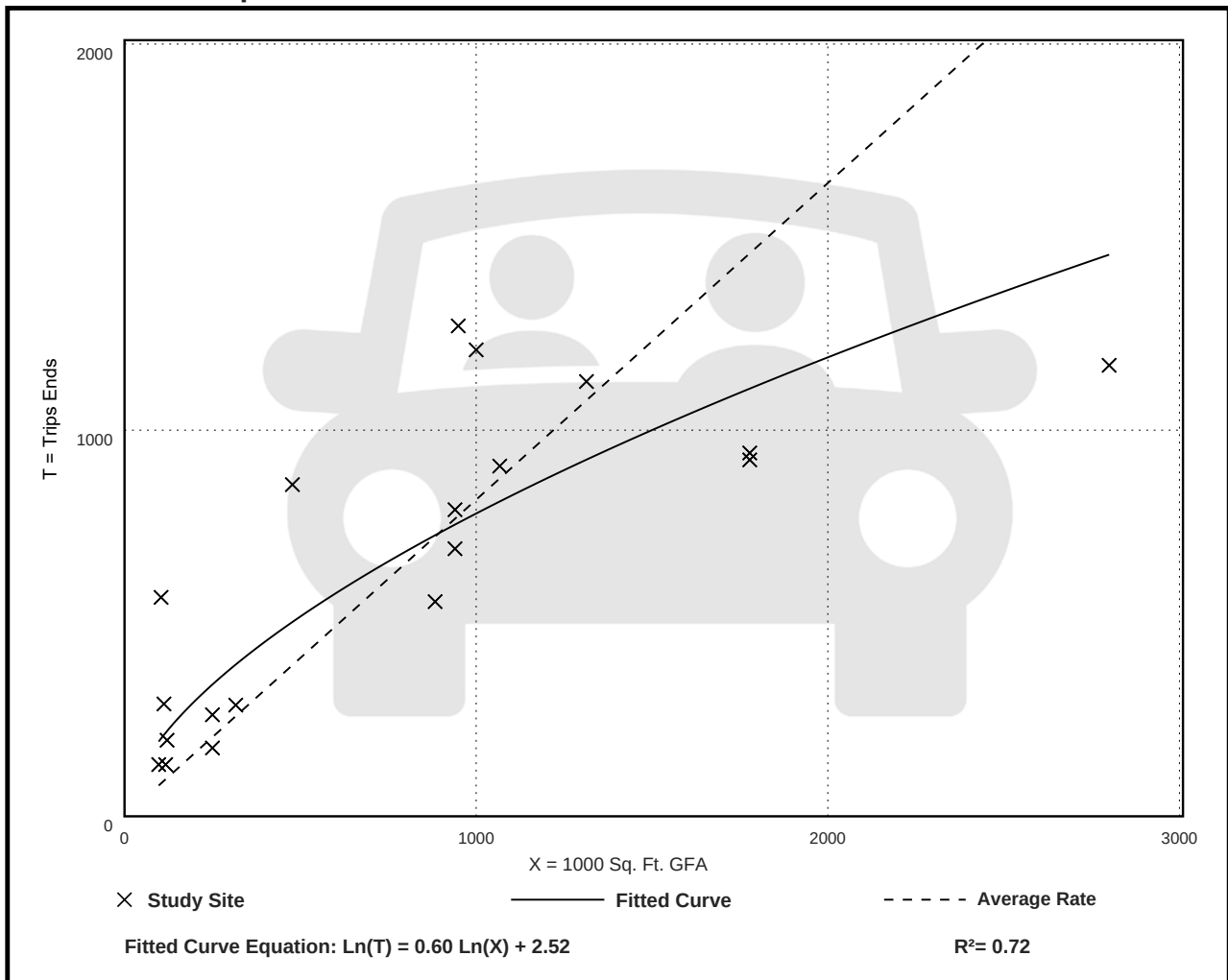
Avg. 1000 Sq. Ft. GFA: 805

Directional Distribution: 67% entering, 33% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.82	0.42 - 5.45	0.55

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 19

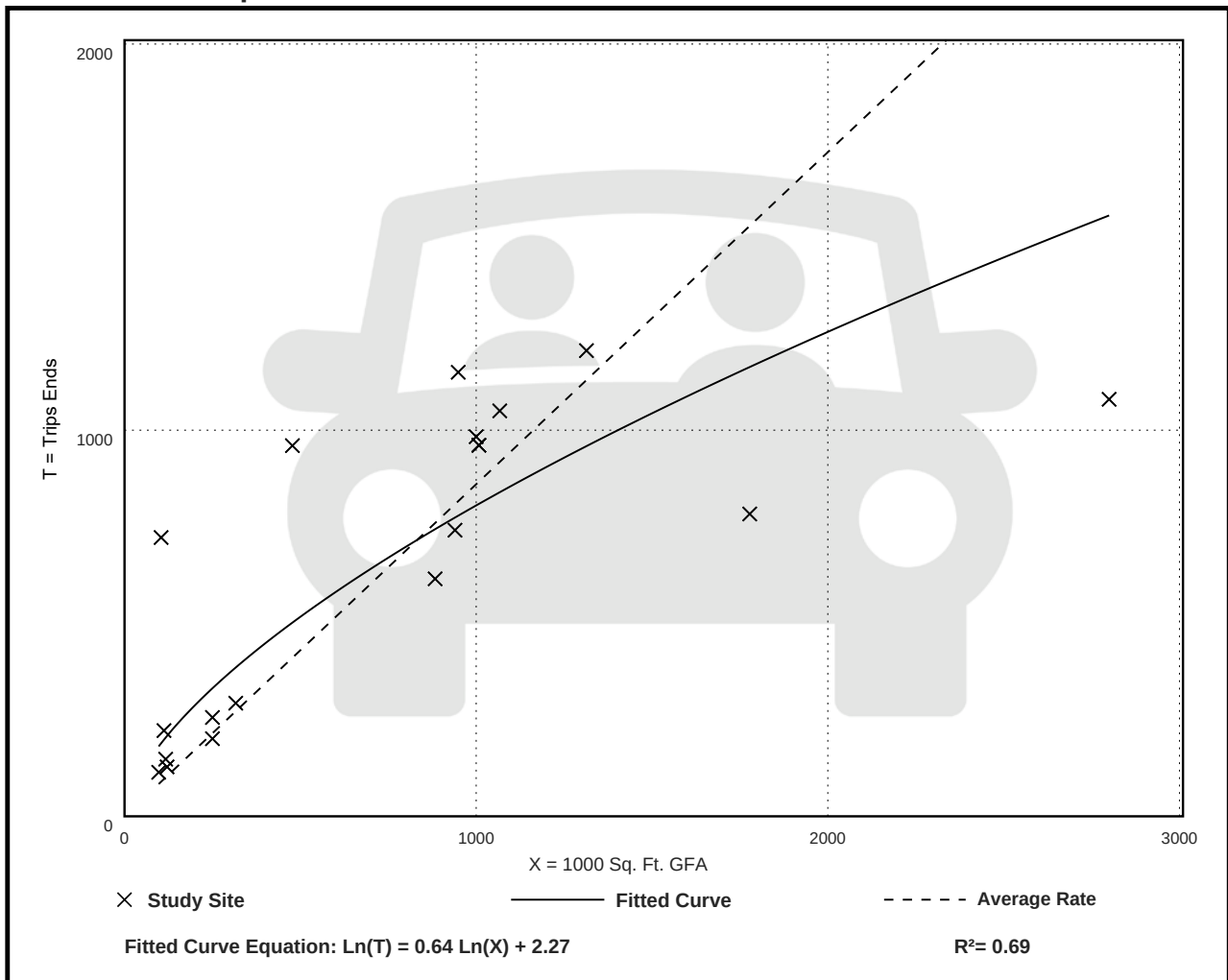
Avg. 1000 Sq. Ft. GFA: 768

Directional Distribution: 35% entering, 65% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.86	0.39 - 6.94	0.65

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 12

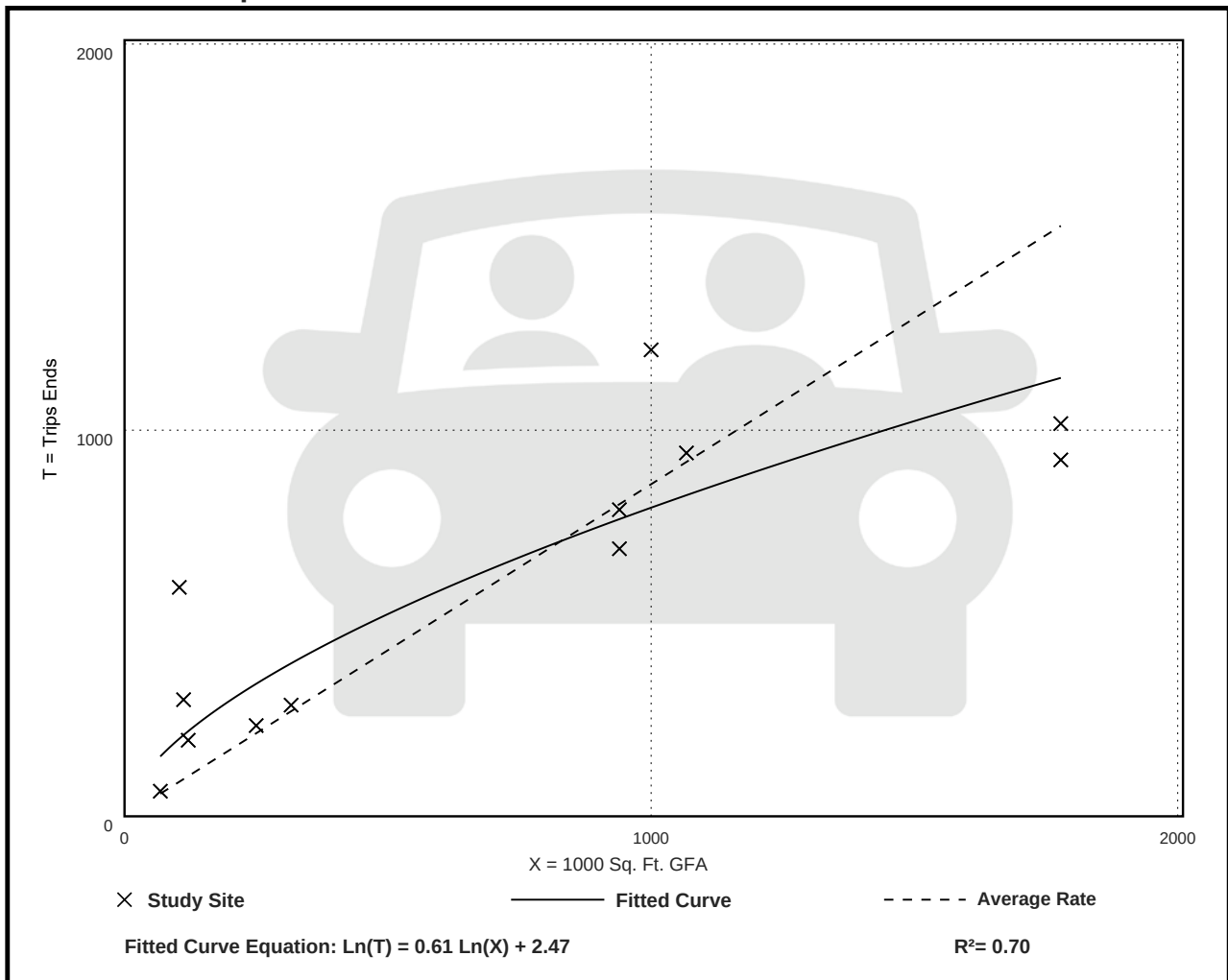
Avg. 1000 Sq. Ft. GFA: 706

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.86	0.52 - 5.70	0.66

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 15

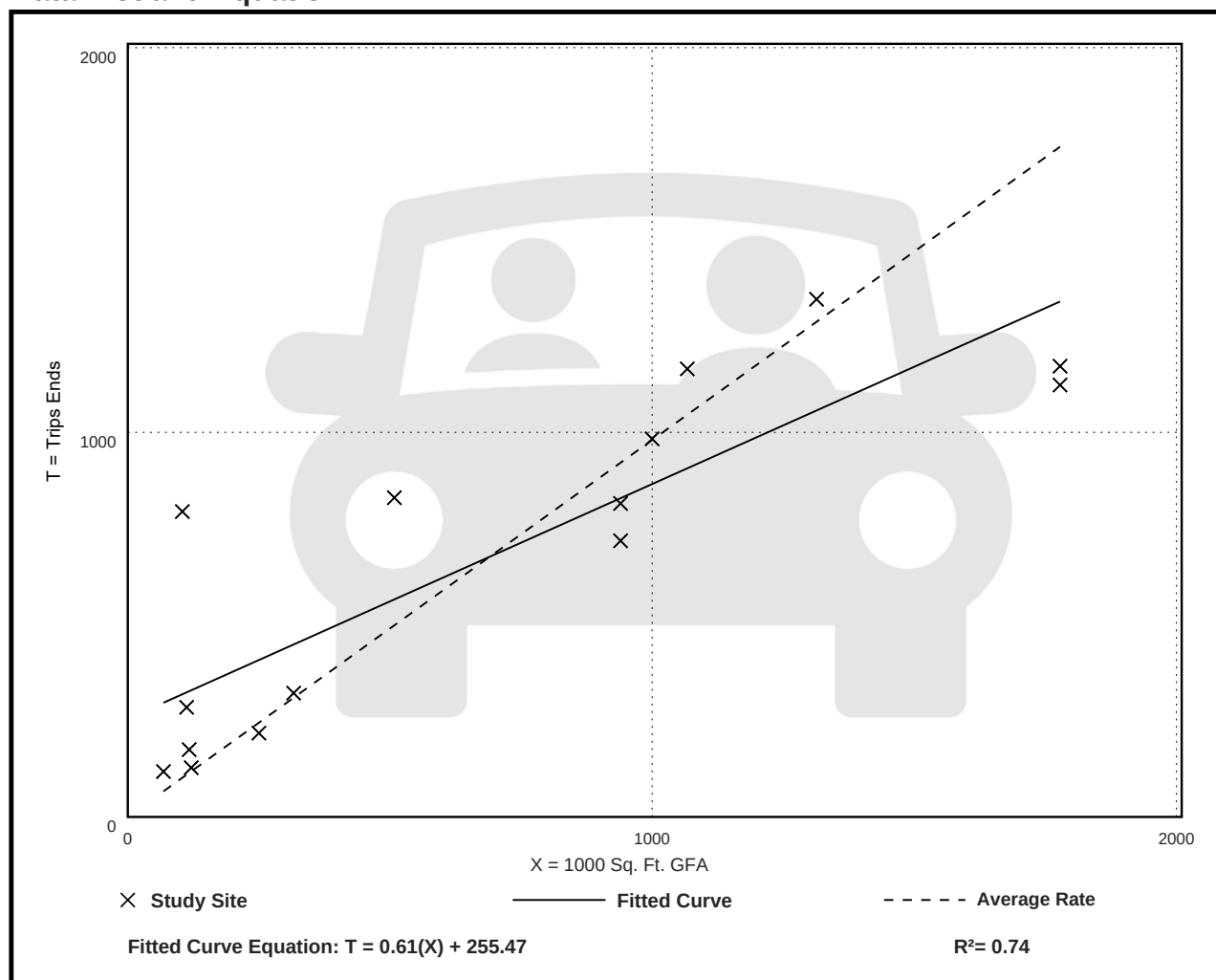
Avg. 1000 Sq. Ft. GFA: 694

Directional Distribution: 39% entering, 61% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.98	0.63 - 7.63	0.76

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 586

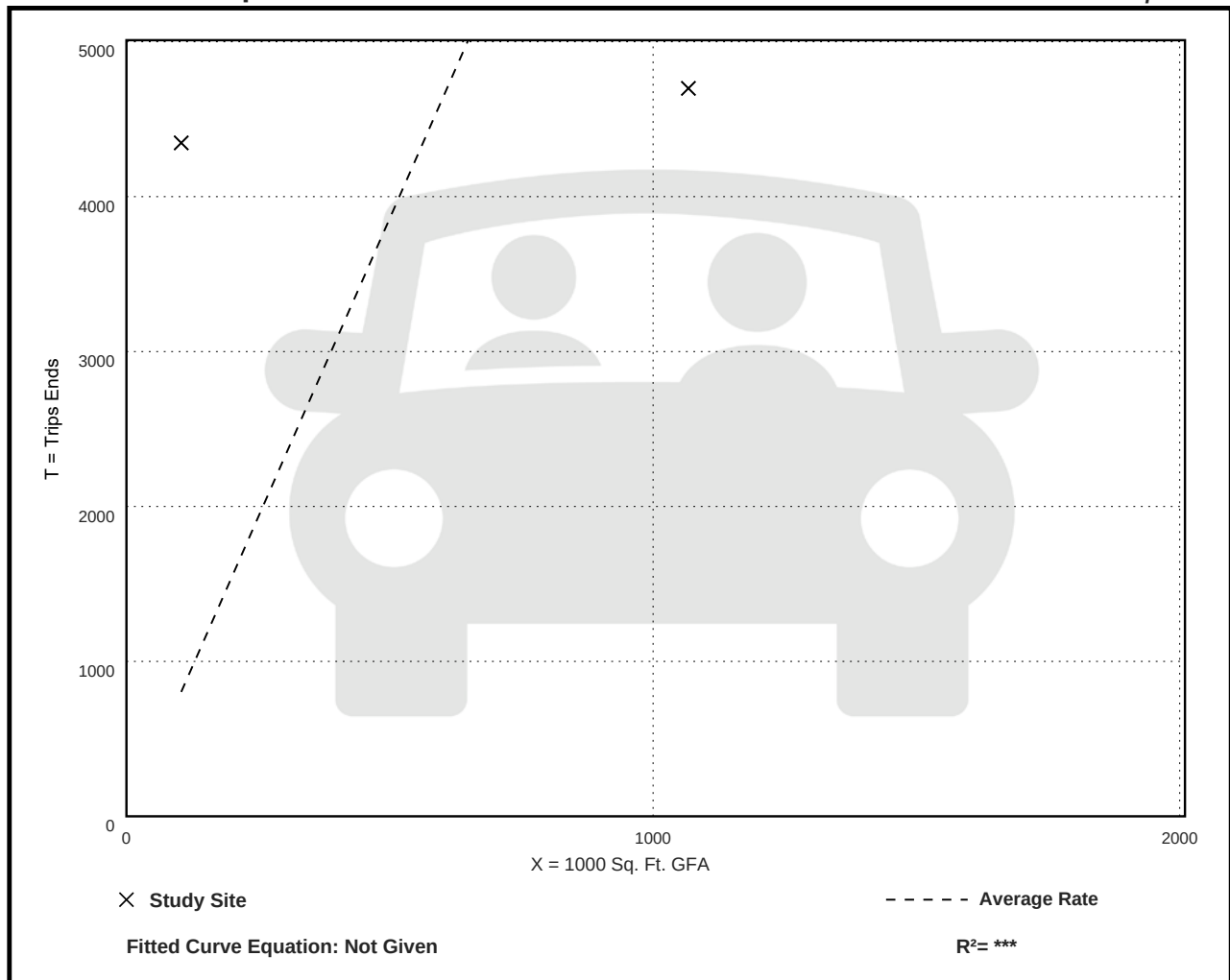
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
7.72	4.40 - 41.80	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 113

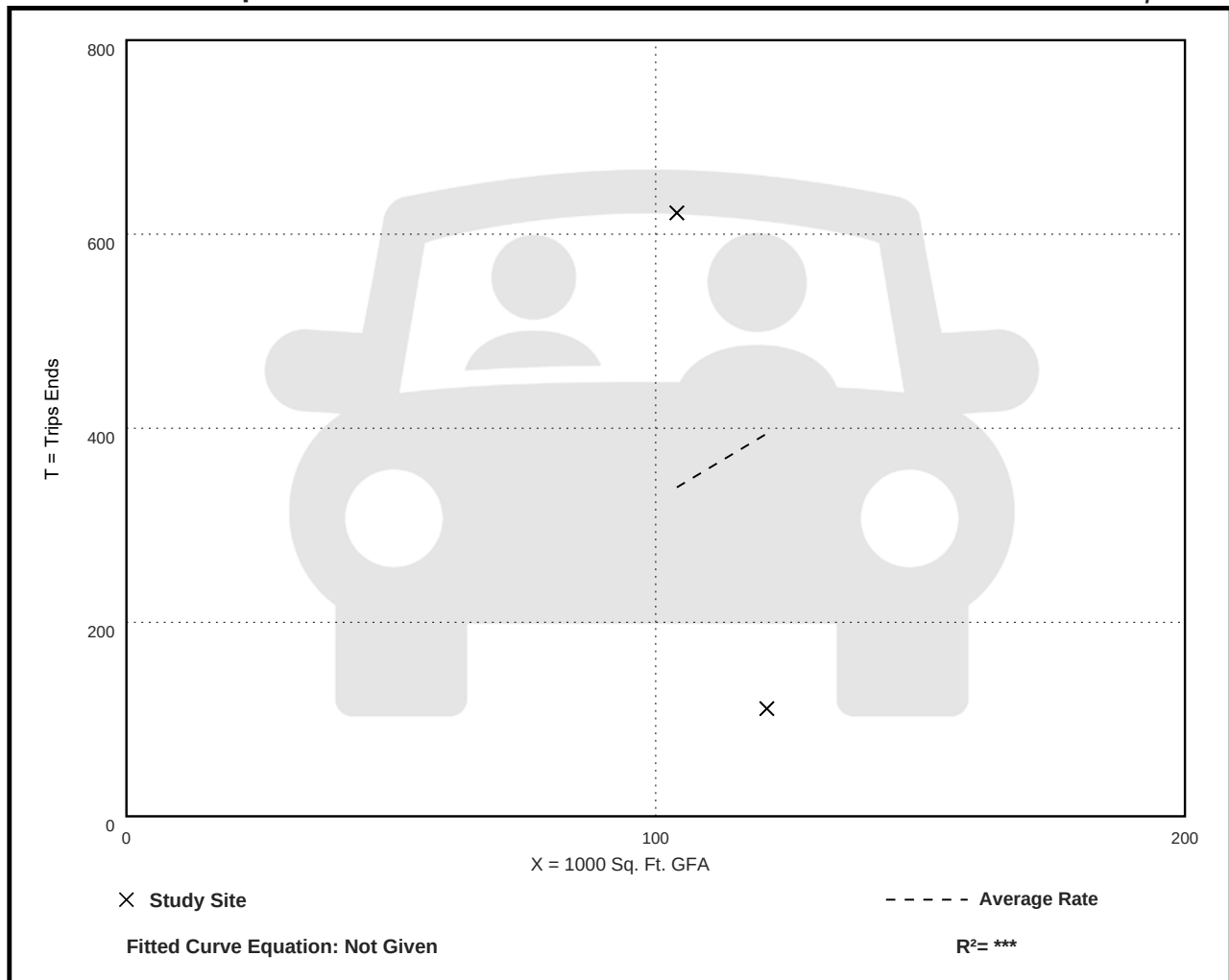
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.26	0.92 - 5.98	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 586

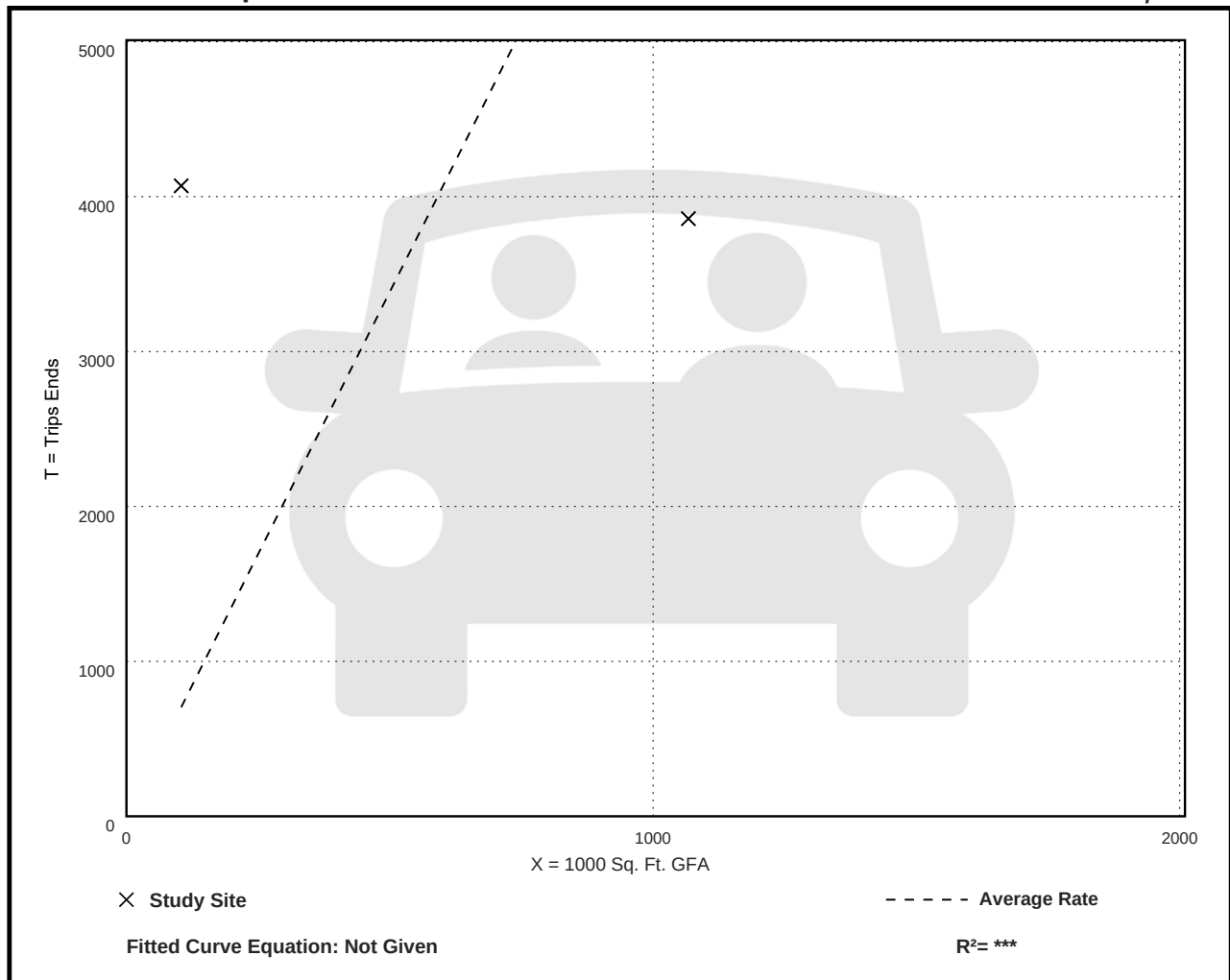
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
6.77	3.62 - 39.13	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 104

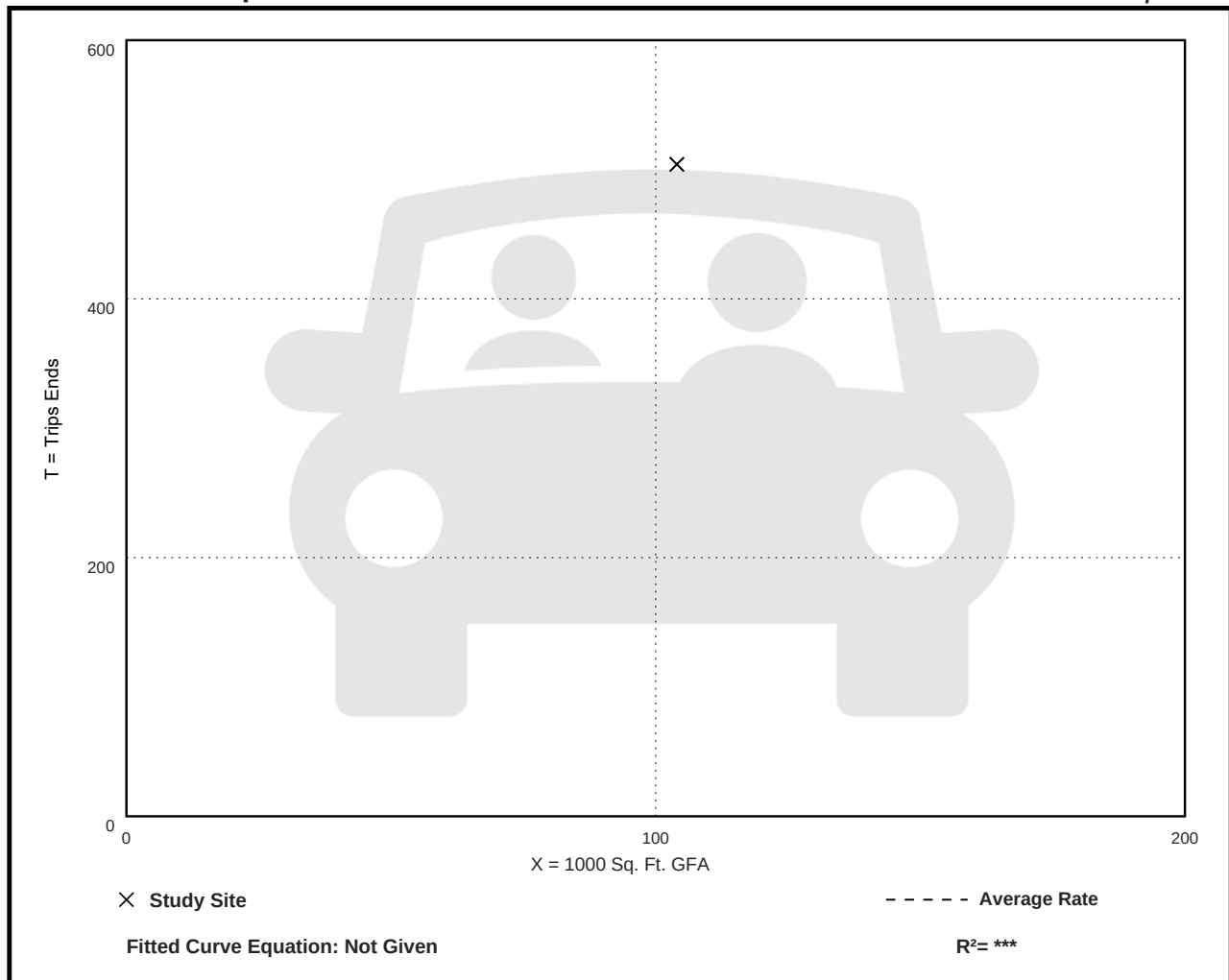
Directional Distribution: 45% entering, 55% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
4.85	4.85 - 4.85	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: Employees
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 7

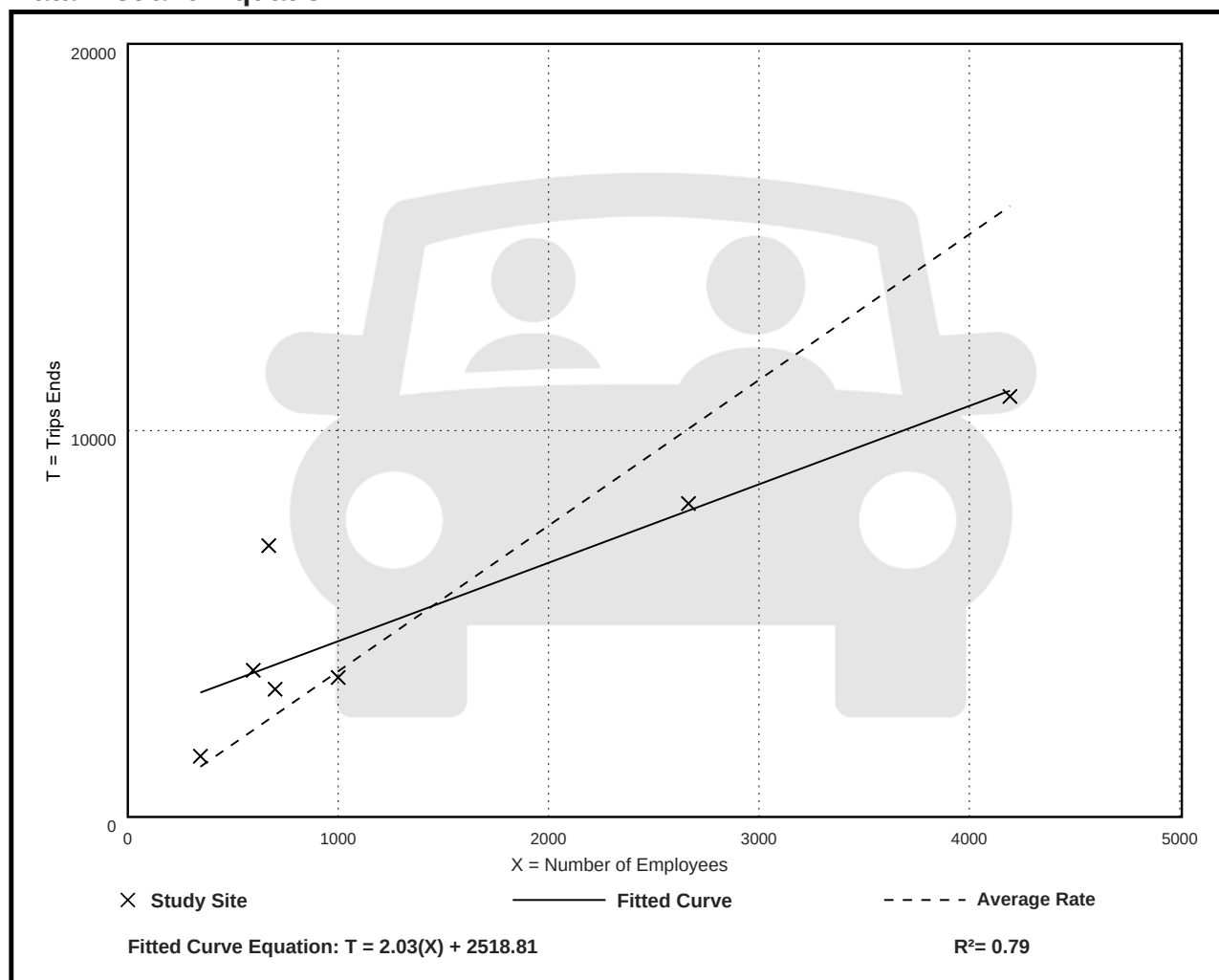
Avg. Num. of Employees: 1453

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
3.77	2.60 - 10.48	2.20

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 16

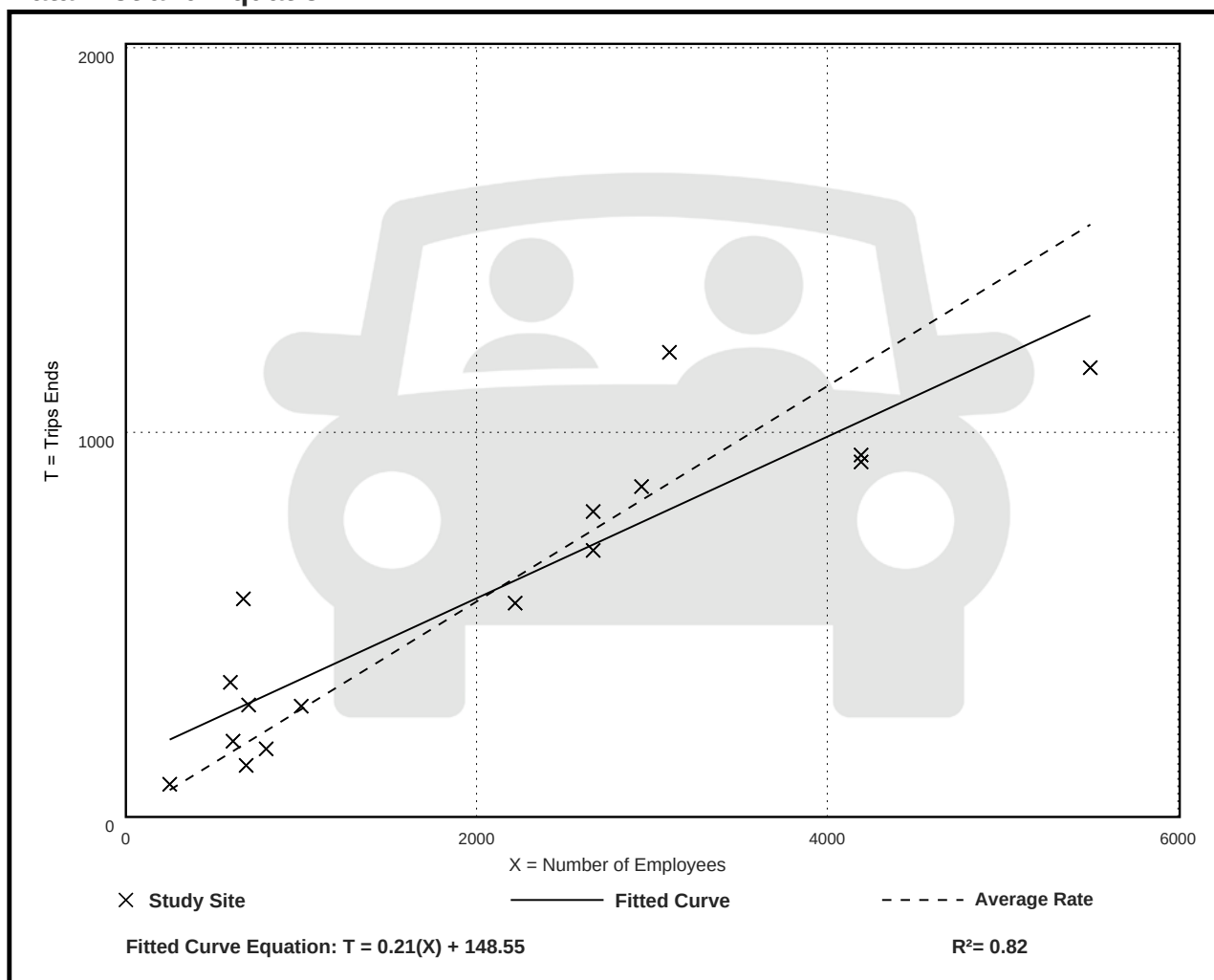
Avg. Num. of Employees: 2049

Directional Distribution: 72% entering, 28% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.28	0.20 - 0.85	0.11

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 13

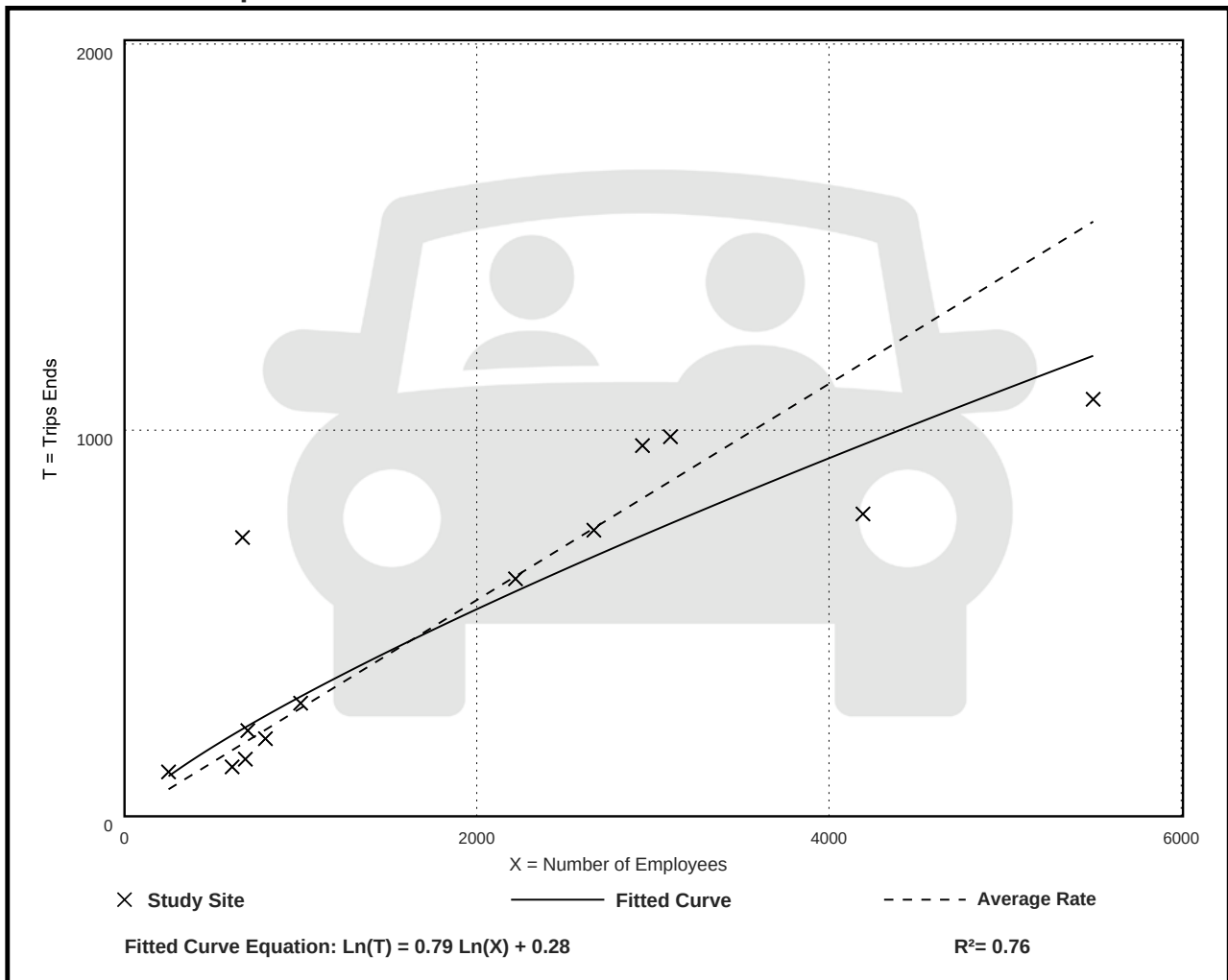
Avg. Num. of Employees: 1949

Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.28	0.19 - 1.08	0.15

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 12

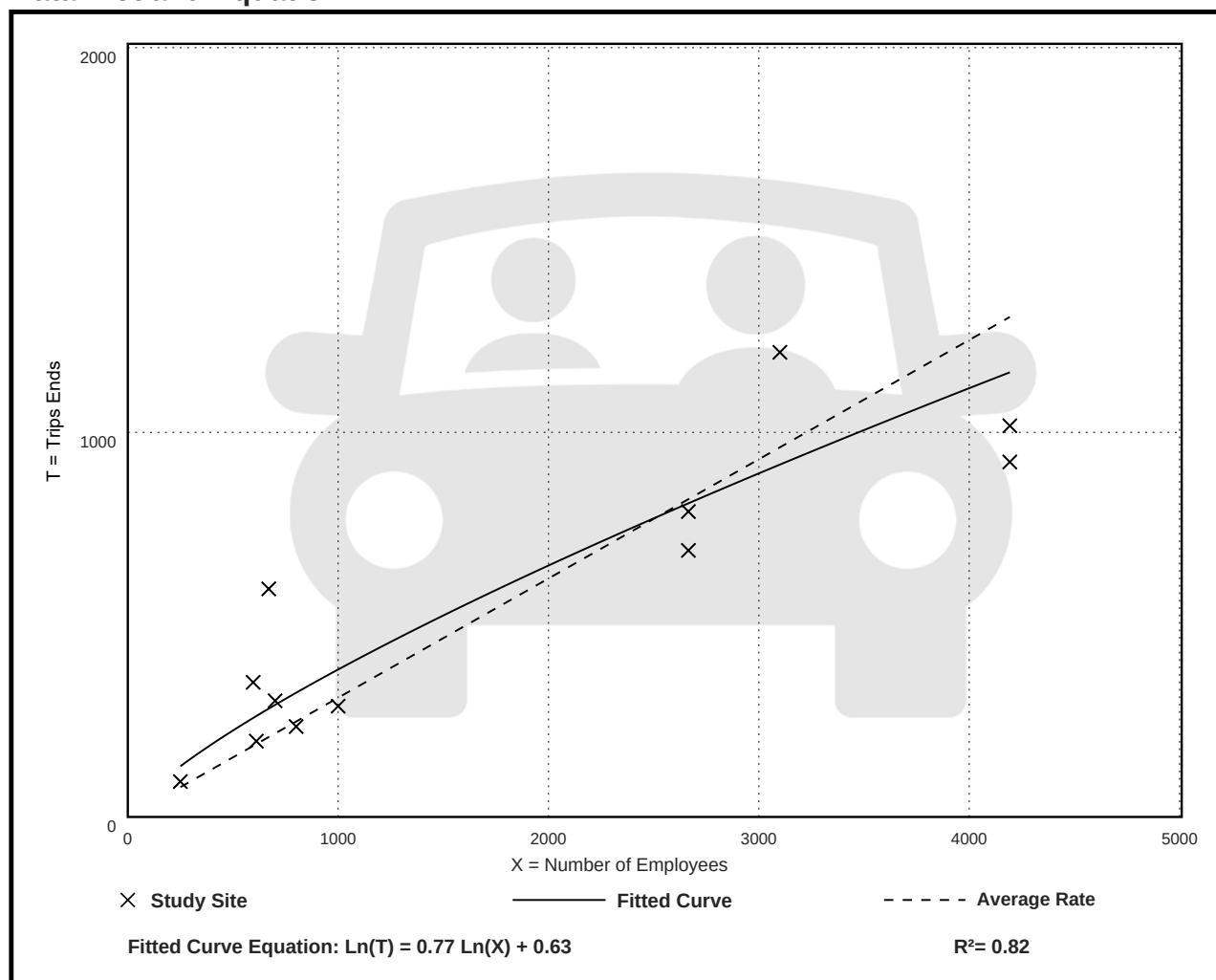
Avg. Num. of Employees: 1787

Directional Distribution: 70% entering, 30% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.31	0.22 - 0.89	0.14

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 13

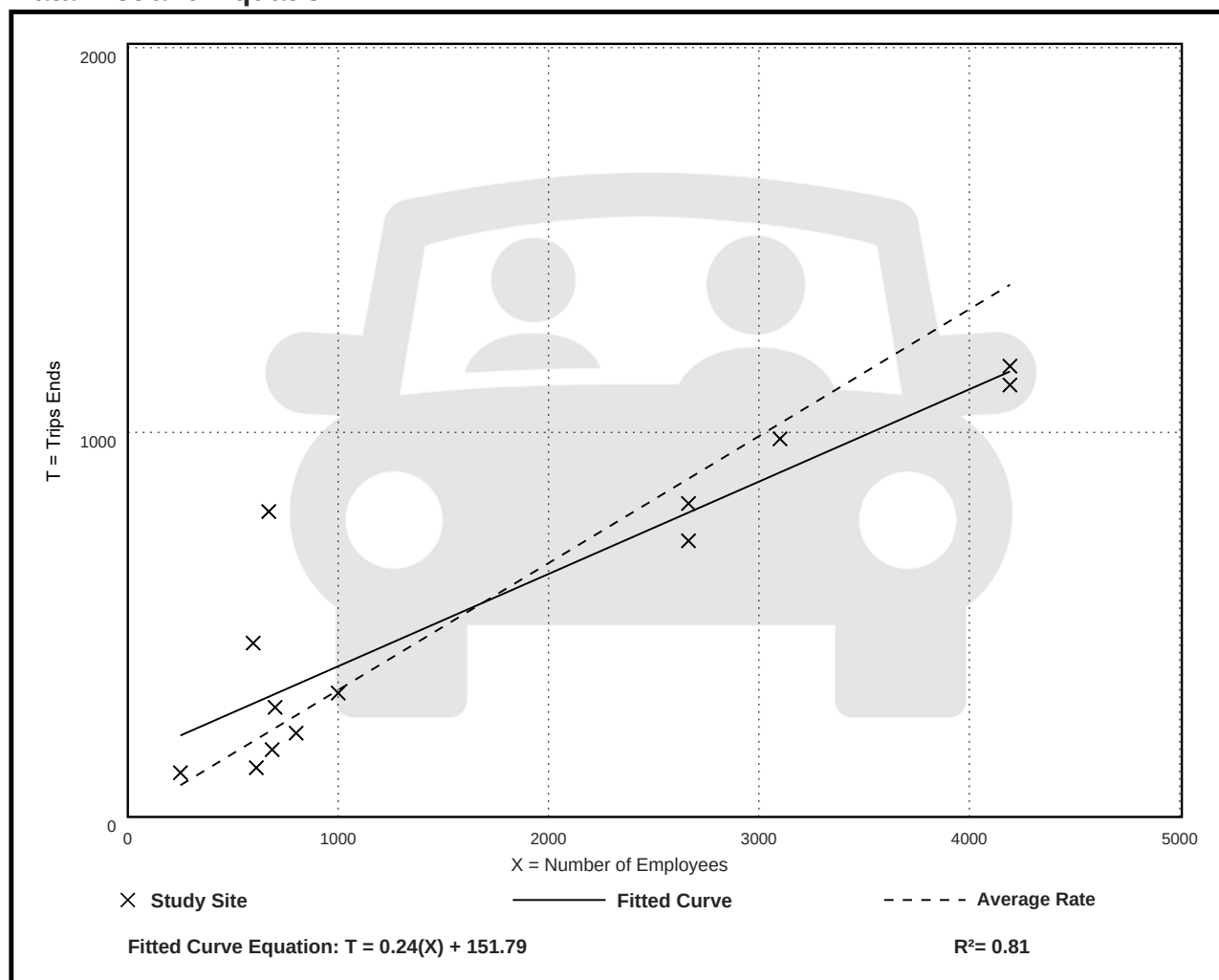
Avg. Num. of Employees: 1702

Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.33	0.21 - 1.19	0.18

Data Plot and Equation



Hospital (610)

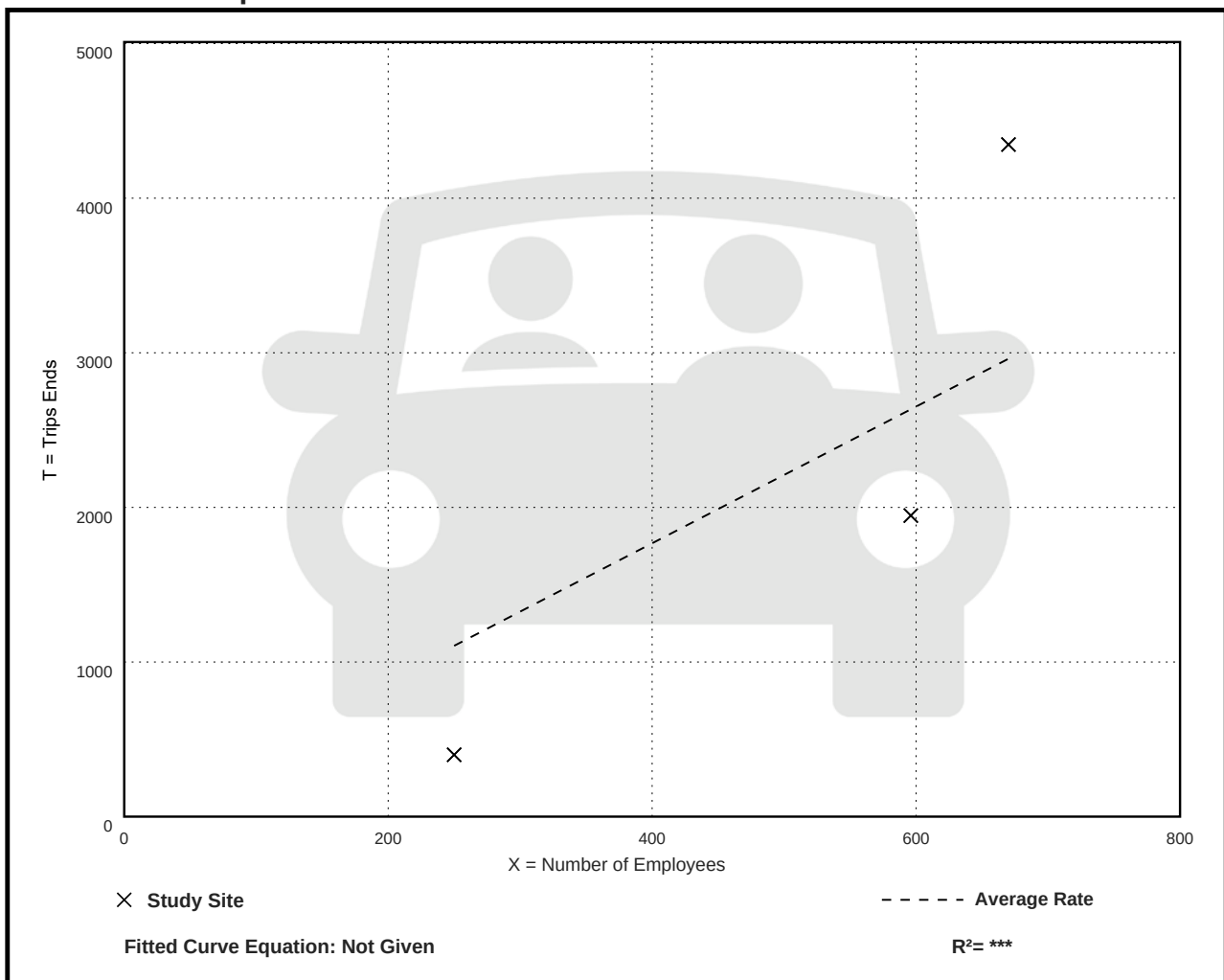
Vehicle Trip Ends vs: Employees
On a: Saturday

Setting/Location: General Urban/Suburban
Number of Studies: 3
Avg. Num. of Employees: 505
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
4.42	1.60 - 6.49	2.36

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 3

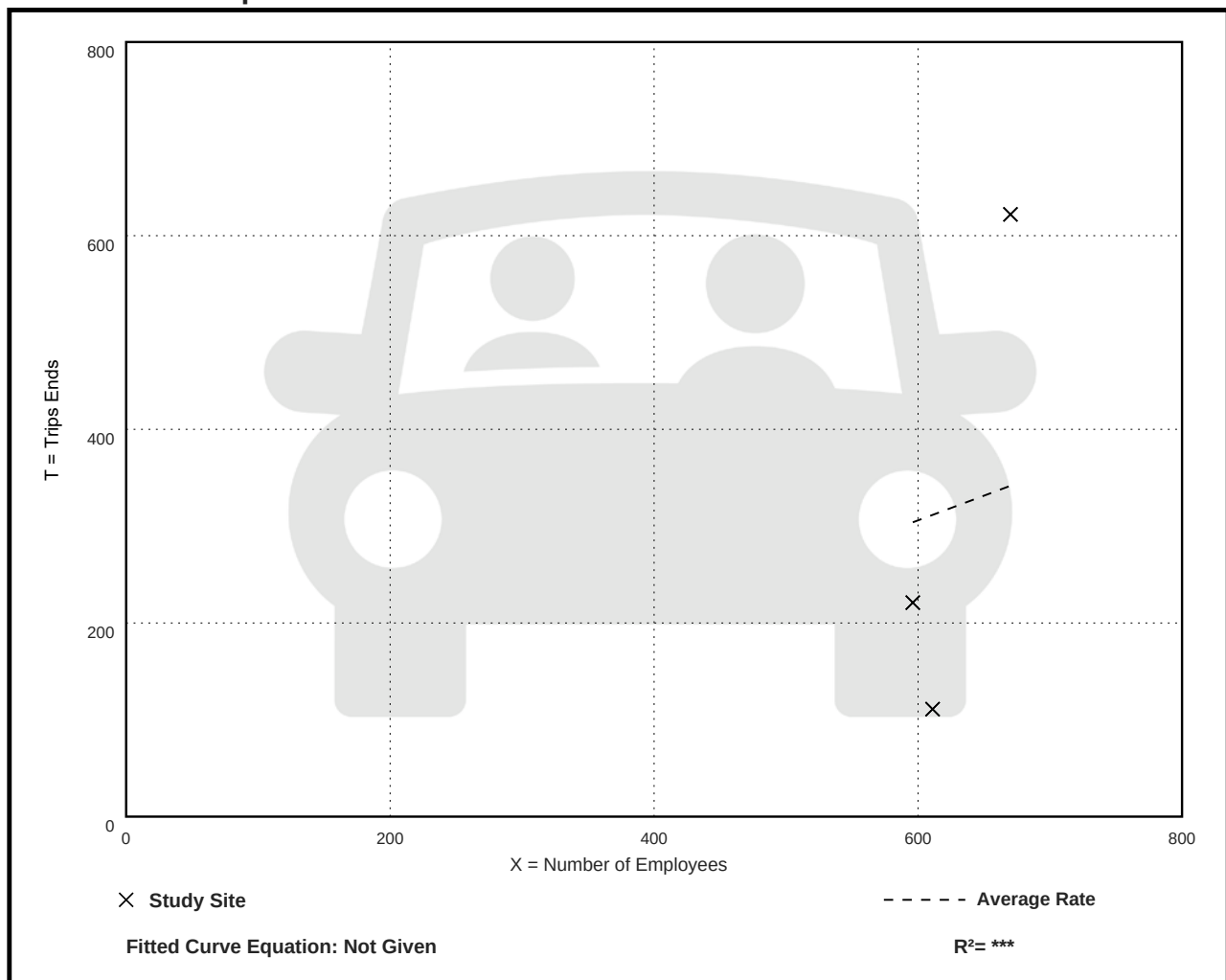
Avg. Num. of Employees: 626

Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.51	0.18 - 0.93	0.39

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees
On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Employees: 460

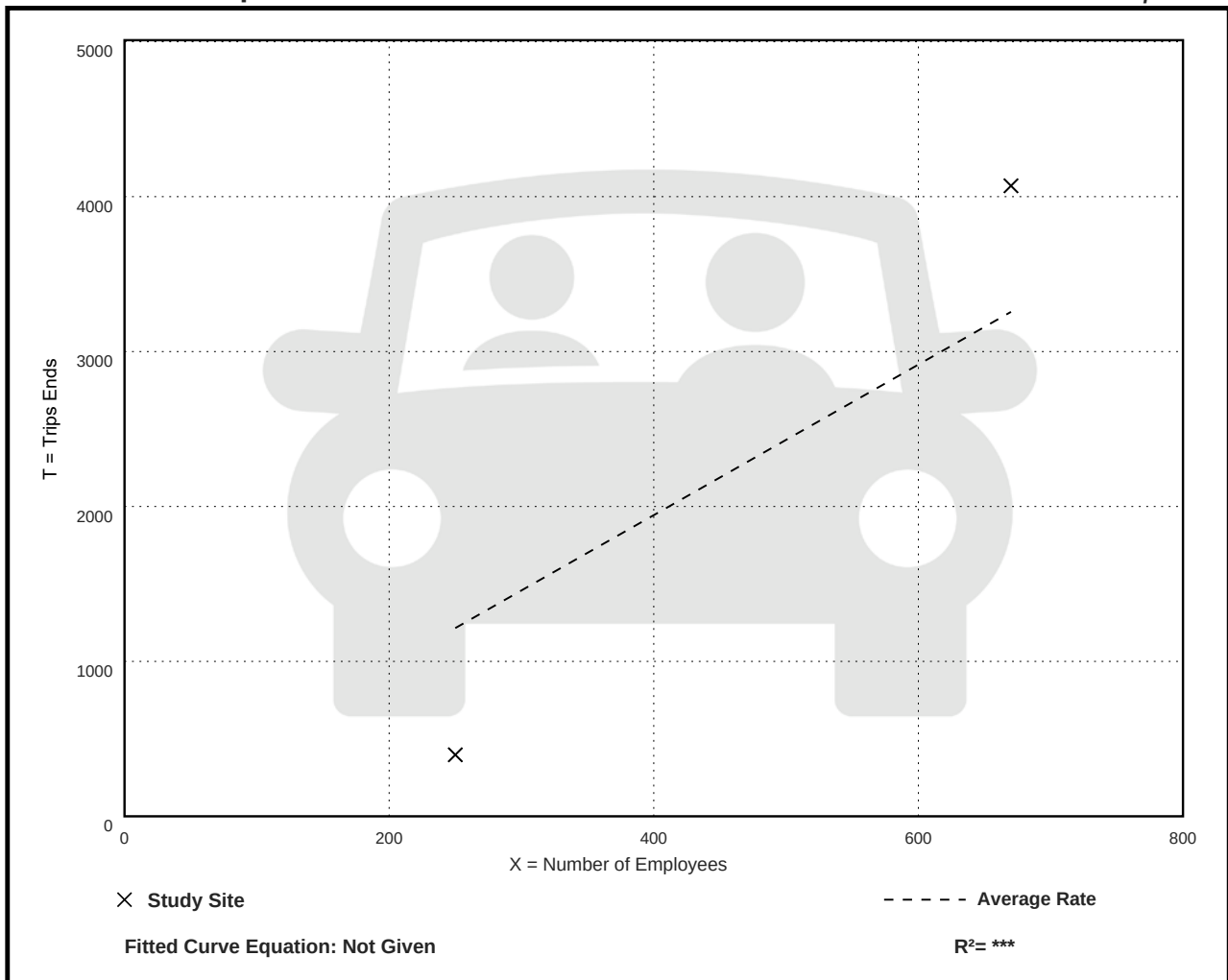
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
4.86	1.59 - 6.07	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: Employees

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Employees: 633

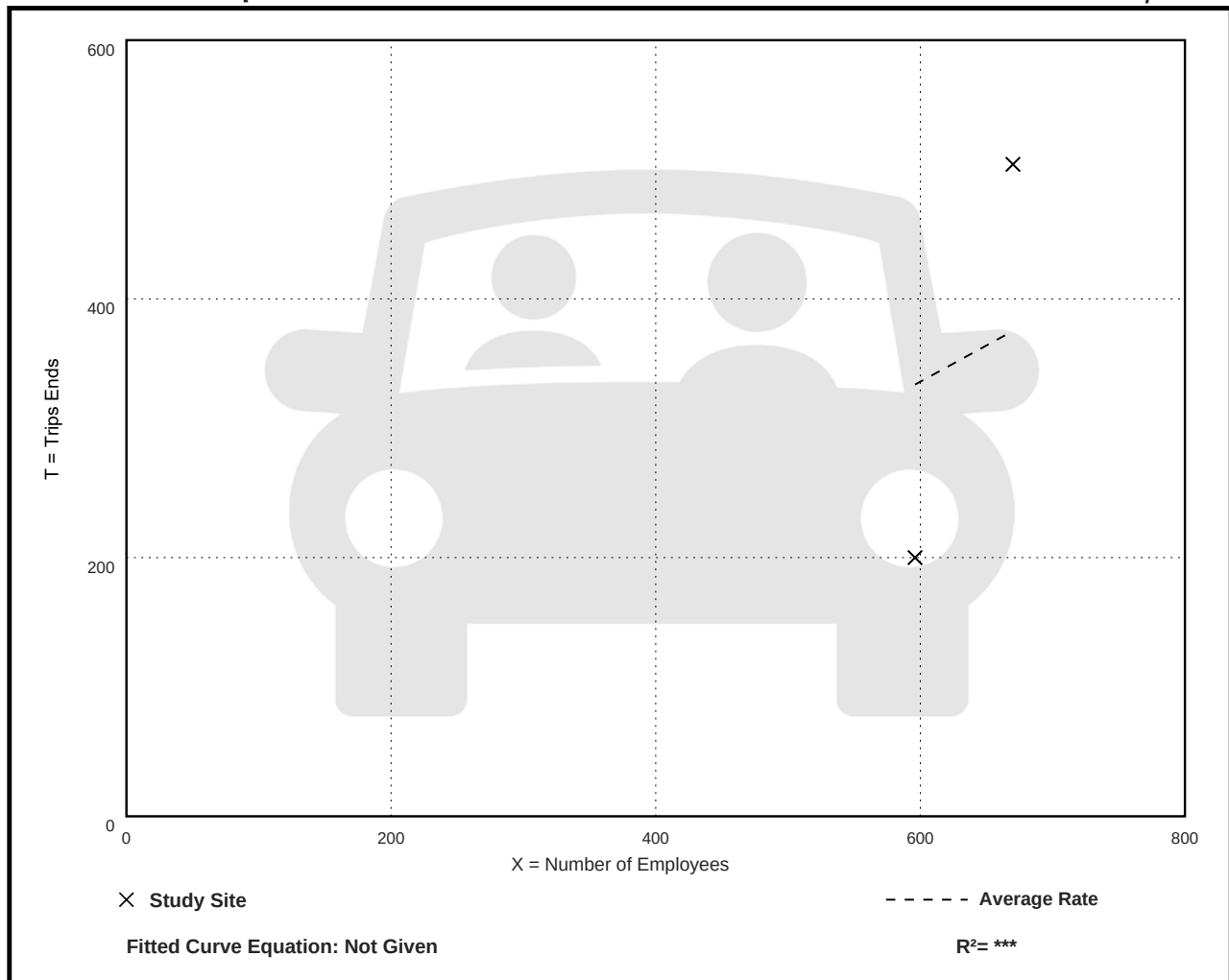
Directional Distribution: 44% entering, 56% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.56	0.34 - 0.75	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Walk+Bike+Transit Trip Ends vs: Beds

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 4

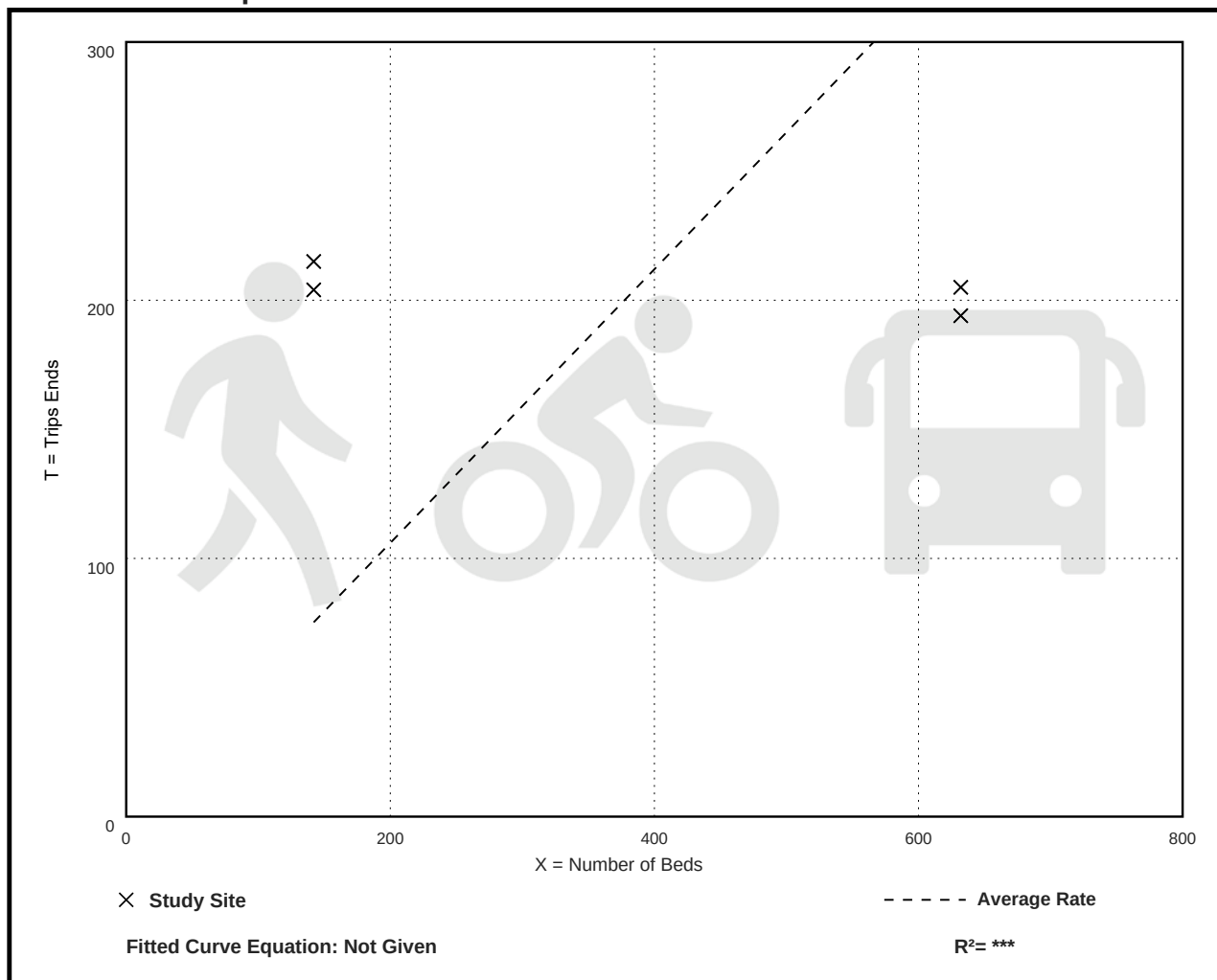
Avg. Num. of Beds: 387

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.53	0.31 - 1.51	0.52

Data Plot and Equation



Hospital (610)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 4

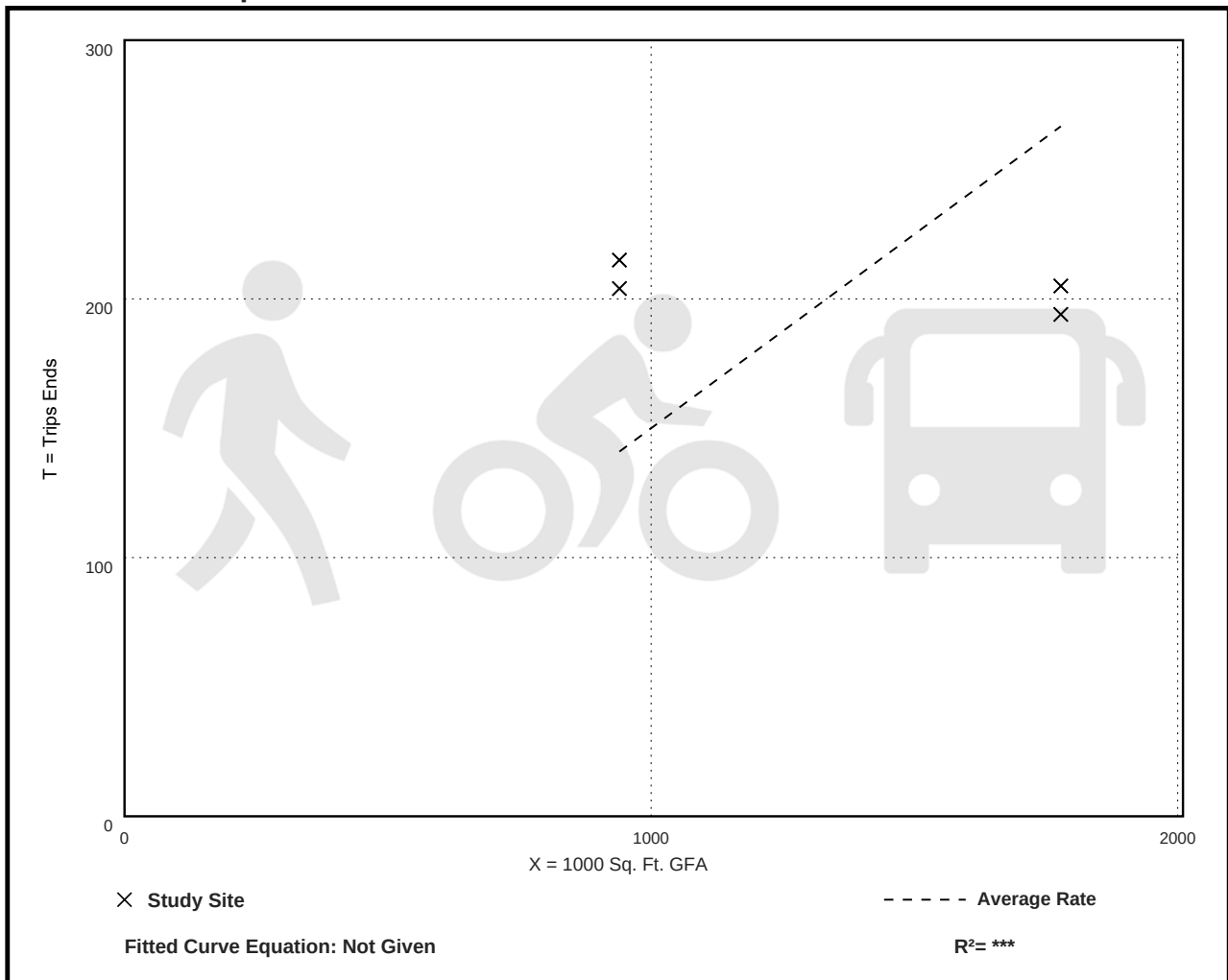
Avg. 1000 Sq. Ft. GFA: 1359

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.15	0.11 - 0.23	0.06

Data Plot and Equation



Hospital (610)

Walk+Bike+Transit Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Employees: 3429

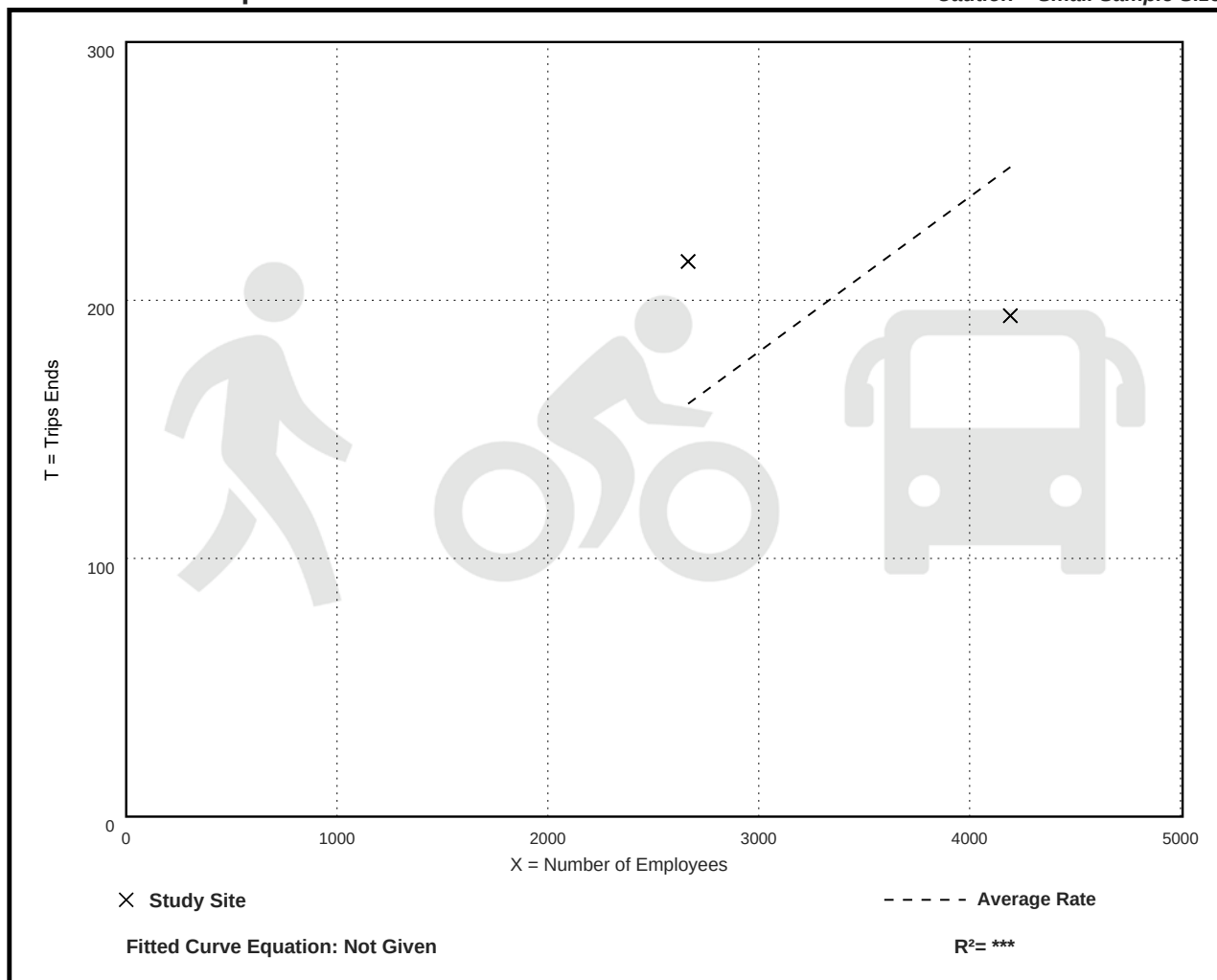
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.06	0.05 - 0.08	***

Data Plot and Equation

Caution – Small Sample Size





APPENDIX H – Synchro Results



Lanes, Volumes, Timings
11: N 35 Ave & Garfield St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	0	18	10	0	1	61	102	3	10	252	27
Future Volume (vph)	17	0	18	10	0	1	61	102	3	10	252	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.929			0.989			0.998			0.988	
Flt Protected		0.977			0.956			0.982			0.998	
Satd. Flow (prot)	0	1691	0	0	1761	0	0	1826	0	0	1837	0
Flt Permitted		0.977			0.956			0.982			0.998	
Satd. Flow (perm)	0	1691	0	0	1761	0	0	1826	0	0	1837	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		448			432			249			584	
Travel Time (s)		10.2			9.8			5.7			13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	0	20	11	0	1	66	111	3	11	274	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	0	0	12	0	0	180	0	0	314	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization 37.7%												
ICU Level of Service A												
Analysis Period (min) 15												

HCM 6th Roundabout
11: N 35 Ave & Garfield St

Intersection				
Intersection Delay, s/veh	4.6			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	38	12	180	314
Demand Flow Rate, veh/h	38	12	183	320
Vehicles Circulating, veh/h	301	198	29	78
Vehicles Exiting, veh/h	97	14	310	132
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.9	3.3	3.9	5.1
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	38	12	183	320
Cap Entry Lane, veh/h	1015	1128	1340	1274
Entry HV Adj Factor	1.000	1.000	0.982	0.980
Flow Entry, veh/h	38	12	180	314
Cap Entry, veh/h	1015	1128	1316	1249
V/C Ratio	0.037	0.011	0.137	0.251
Control Delay, s/veh	3.9	3.3	3.9	5.1
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	1

Lanes, Volumes, Timings
14: N Park Rd & Garfield St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	0	1	2	1	7	3	845	3	2	760	2
Future Volume (vph)	3	0	1	2	1	7	3	845	3	2	760	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.966			0.902							
Flt Protected		0.964			0.991							
Satd. Flow (prot)	0	1735	0	0	1665	0	0	3539	0	0	3539	0
Flt Permitted		0.964			0.991							
Satd. Flow (perm)	0	1735	0	0	1665	0	0	3539	0	0	3539	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		497			365			517			589	
Travel Time (s)		11.3			8.3			11.8			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	0	1	2	1	8	3	918	3	2	826	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	11	0	0	924	0	0	830	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	35.5%											
Analysis Period (min)	15											
	ICU Level of Service A											

HCM 6th TWSC
14: N Park Rd & Garfield St

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↑			↕↑	
Traffic Vol, veh/h	3	0	1	2	1	7	3	845	3	2	760	2
Future Vol, veh/h	3	0	1	2	1	7	3	845	3	2	760	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	1	2	1	8	3	918	3	2	826	2
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1297	1758	414	1343	1758	461	828	0	0	921	0	0
Stage 1	831	831	-	926	926	-	-	-	-	-	-	-
Stage 2	466	927	-	417	832	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	119	84	587	110	84	547	799	-	-	737	-	-
Stage 1	330	383	-	289	346	-	-	-	-	-	-	-
Stage 2	546	345	-	584	382	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	115	83	587	109	83	547	799	-	-	737	-	-
Mov Cap-2 Maneuver	115	83	-	109	83	-	-	-	-	-	-	-
Stage 1	327	381	-	287	343	-	-	-	-	-	-	-
Stage 2	532	342	-	580	380	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	30.8		21.3		0		0					
HCM LOS	D		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	799	-	-	144	232	737	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.03	0.047	0.003	-	-				
HCM Control Delay (s)	9.5	0	-	30.8	21.3	9.9	-	-				
HCM Lane LOS	A	A	-	D	C	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-				

Lanes, Volumes, Timings
3495: Hospital Office Entrance & N 35 Ave

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	136	347	168	258	43
Future Volume (vph)	23	136	347	168	258	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.588			
Satd. Flow (perm)	1770	1583	1095	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		148				47
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	148	377	183	280	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	25	148	377	183	280	47
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6

Existing AM Peak

Synchro 11 Report

Lanes, Volumes, Timings

3495: Hospital Office Entrance & N 35 Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	28.0	28.0	28.0	28.0
Total Split (s)	31.0	31.0	41.0	41.0	41.0	41.0
Total Split (%)	43.1%	43.1%	56.9%	56.9%	56.9%	56.9%
Maximum Green (s)	25.0	25.0	35.0	35.0	35.0	35.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)	10.0	10.0	41.3	41.3	41.3	41.3
Actuated g/C Ratio	0.17	0.17	0.70	0.70	0.70	0.70
v/c Ratio	0.08	0.38	0.49	0.14	0.21	0.04
Control Delay	20.8	7.7	8.8	4.8	5.1	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	7.7	8.8	4.8	5.1	1.7
LOS	C	A	A	A	A	A
Approach Delay	9.6			7.5	4.6	
Approach LOS	A			A	A	

Intersection Summary

Area Type: Other

Cycle Length: 72

Actuated Cycle Length: 58.8

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 6.9

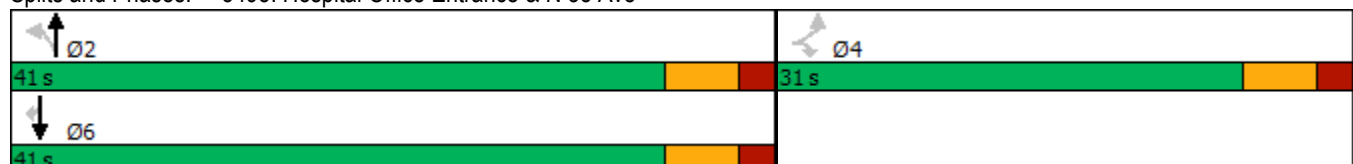
Intersection LOS: A

Intersection Capacity Utilization 56.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3495: Hospital Office Entrance & N 35 Ave



Queues

3495: Hospital Office Entrance & N 35 Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	25	148	377	183	280	47
v/c Ratio	0.08	0.38	0.49	0.14	0.21	0.04
Control Delay	20.8	7.7	8.8	4.8	5.1	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	7.7	8.8	4.8	5.1	1.7
Queue Length 50th (ft)	7	0	64	23	37	0
Queue Length 95th (ft)	24	40	132	44	66	9
Internal Link Dist (ft)	276			307	169	
Turn Bay Length (ft)	140	140	220			120
Base Capacity (vph)	755	760	770	1309	1309	1127
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.19	0.49	0.14	0.21	0.04
Intersection Summary						

HCM Signalized Intersection Capacity Analysis

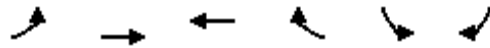
3495: Hospital Office Entrance & N 35 Ave



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	136	347	168	258	43
Future Volume (vph)	23	136	347	168	258	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.59	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1095	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	148	377	183	280	47
RTOR Reduction (vph)	0	129	0	0	0	16
Lane Group Flow (vph)	25	19	377	183	280	31
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	7.9	7.9	40.1	40.1	40.1	40.1
Effective Green, g (s)	7.9	7.9	40.1	40.1	40.1	40.1
Actuated g/C Ratio	0.13	0.13	0.67	0.67	0.67	0.67
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	233	208	731	1245	1245	1057
v/s Ratio Prot				0.10	0.15	
v/s Ratio Perm	c0.01	0.01	c0.34			0.02
v/c Ratio	0.11	0.09	0.52	0.15	0.22	0.03
Uniform Delay, d1	22.9	22.9	5.0	3.7	3.9	3.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	2.6	0.2	0.4	0.1
Delay (s)	23.1	23.1	7.6	3.9	4.3	3.4
Level of Service	C	C	A	A	A	A
Approach Delay (s)	23.1			6.4	4.2	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			8.4		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.45			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			56.1%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings

23: Johnson Street & Emergency Entrance



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	128	529	740	131	16	41
Future Volume (vph)	128	529	740	131	16	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			220	52	66
Storage Lanes	0			1	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1863	1583	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		306	685		513	
Travel Time (s)		7.0	15.6		11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	139	575	804	142	17	45
Shared Lane Traffic (%)						
Lane Group Flow (vph)	139	575	804	142	17	45
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	59.4%			ICU Level of Service B		
Analysis Period (min)	15					

HCM 6th TWSC

23: Johnson Street & Emergency Entrance

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	128	529	740	131	16	41
Future Vol, veh/h	128	529	740	131	16	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	139	575	804	142	17	45
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	946	0	-	0	1657	804
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	853	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	725	-	-	-	108	383
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	418	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	725	-	-	-	87	383
Mov Cap-2 Maneuver	-	-	-	-	87	-
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	418	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.2	0		27.1		
HCM LOS	D					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	725	-	-	-	87	383
HCM Lane V/C Ratio	0.192	-	-	-	0.2	0.116
HCM Control Delay (s)	11.1	-	-	-	56.4	15.6
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.7	-	-	-	0.7	0.4

Lanes, Volumes, Timings
21: Johnson St & Employee Garage

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	274	611	25	9	539	223	0	0	3	0	0	302
Future Volume (vph)	274	611	25	9	539	223	0	0	3	0	0	302
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270		0	0		120	0		0	130		120
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.957			0.865				0.850
Flt Protected	0.950				0.999							
Satd. Flow (prot)	1770	1852	0	0	3384	0	0	1611	0	1863	0	1583
Flt Permitted	0.950				0.999							
Satd. Flow (perm)	1770	1852	0	0	3384	0	0	1611	0	1863	0	1583
Link Speed (mph)		30			30			30				30
Link Distance (ft)		665			306			73				508
Travel Time (s)		15.1			7.0			1.7				11.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	298	664	27	10	586	242	0	0	3	0	0	328
Shared Lane Traffic (%)												
Lane Group Flow (vph)	298	691	0	0	838	0	0	3	0	0	0	328
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 69.3%	ICU Level of Service C											
Analysis Period (min) 15												

HCM 6th TWSC
21: Johnson St & Employee Garage

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	274	611	25	9	539	223	0	0	3	0	0	302
Future Vol, veh/h	274	611	25	9	539	223	0	0	3	0	0	302
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	270	-	-	-	-	120	-	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	298	664	27	10	586	242	0	0	3	0	0	328
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	828	0	0	691	0	0	1587	2122	678	2002	-	414
Stage 1	-	-	-	-	-	-	1274	1274	-	727	-	-
Stage 2	-	-	-	-	-	-	313	848	-	1275	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	7.33	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.53	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	6.13	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	-	3.319
Pot Cap-1 Maneuver	801	-	-	902	-	-	80	50	451	40	0	588
Stage 1	-	-	-	-	-	-	204	237	-	382	0	-
Stage 2	-	-	-	-	-	-	673	377	-	204	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	801	-	-	902	-	-	25	31	451	28	-	588
Mov Cap-2 Maneuver	-	-	-	-	-	-	25	31	-	28	-	-
Stage 1	-	-	-	-	-	-	128	149	-	240	-	-
Stage 2	-	-	-	-	-	-	291	369	-	127	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.7			0.1			13			18.6		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	451	801	-	-	902	-	-	-	588			
HCM Lane V/C Ratio	0.007	0.372	-	-	0.011	-	-	-	0.558			
HCM Control Delay (s)	13	12.1	-	-	9	-	-	0	18.6			
HCM Lane LOS	B	B	-	-	A	-	-	A	C			
HCM 95th %tile Q(veh)	0	1.7	-	-	0	-	-	-	3.4			

Lanes, Volumes, Timings

3151: N 35th Ave & Johnson Street/Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	443	47	115	542	263	235	215	114	226	117	52
Future Volume (vph)	58	443	47	115	542	263	235	215	114	226	117	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.986				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1837	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.258			0.236			0.580			0.576		
Satd. Flow (perm)	481	1837	0	440	1863	1583	1080	3539	1583	1073	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				219			124			110
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	482	51	125	589	286	255	234	124	246	127	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	533	0	125	589	286	255	234	124	246	127	57
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8

Synchro 11 Report

Existing AM Peak

Lanes, Volumes, Timings

3151: N 35th Ave & Johnson Street/Johnson St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	42.0		11.0	42.0	42.0	11.0	30.0	30.0	11.0	30.0	30.0
Total Split (s)	26.0	51.0		26.0	51.0	51.0	26.0	46.0	46.0	26.0	46.0	46.0
Total Split (%)	17.4%	34.2%		17.4%	34.2%	34.2%	17.4%	30.9%	30.9%	17.4%	30.9%	30.9%
Maximum Green (s)	20.0	45.0		20.0	45.0	45.0	20.0	40.0	40.0	20.0	40.0	40.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		29.0			29.0	29.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effect Green (s)	52.6	45.3		58.9	50.5	50.5	30.6	13.5	13.5	29.5	13.0	13.0
Actuated g/C Ratio	0.48	0.41		0.54	0.46	0.46	0.28	0.12	0.12	0.27	0.12	0.12
v/c Ratio	0.20	0.70		0.35	0.69	0.34	0.62	0.54	0.41	0.62	0.58	0.20
Control Delay	14.5	34.0		15.4	30.9	7.1	36.1	50.4	12.4	36.3	57.4	1.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	34.0		15.4	30.9	7.1	36.1	50.4	12.4	36.3	57.4	1.6
LOS	B	C		B	C	A	D	D	B	D	E	A
Approach Delay		32.0			22.2			36.8			37.9	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 149

Actuated Cycle Length: 109.5

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 30.3

Intersection LOS: C

Intersection Capacity Utilization 71.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3151: N 35th Ave & Johnson Street/Johnson St

26 s	51 s	26 s	46 s
26 s	51 s	26 s	46 s

Queues

3151: N 35th Ave & Johnson Street/Johnson St

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	63	533	125	589	286	255	234	124	246	127	57
v/c Ratio	0.20	0.70	0.35	0.69	0.34	0.62	0.54	0.41	0.62	0.58	0.20
Control Delay	14.5	34.0	15.4	30.9	7.1	36.1	50.4	12.4	36.3	57.4	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	34.0	15.4	30.9	7.1	36.1	50.4	12.4	36.3	57.4	1.6
Queue Length 50th (ft)	20	303	40	338	27	138	82	0	132	86	0
Queue Length 95th (ft)	46	509	80	542	94	223	131	56	214	156	2
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	505	762	490	859	848	453	1301	660	448	684	651
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.70	0.26	0.69	0.34	0.56	0.18	0.19	0.55	0.19	0.09
Intersection Summary											

HCM 6th Signalized Intersection Summary 3151: N 35th Ave & Johnson Street/Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	443	47	115	542	263	235	215	114	226	117	52
Future Volume (veh/h)	58	443	47	115	542	263	235	215	114	226	117	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	482	51	125	589	286	255	234	124	246	127	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	742	79	367	881	747	388	407	182	379	206	175
Arrive On Green	0.03	0.45	0.45	0.06	0.47	0.47	0.15	0.11	0.11	0.14	0.11	0.11
Sat Flow, veh/h	1781	1663	176	1781	1870	1585	1781	3554	1585	1781	1870	1585
Grp Volume(v), veh/h	63	0	533	125	589	286	255	234	124	246	127	57
Grp Sat Flow(s),veh/h/ln	1781	0	1839	1781	1870	1585	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	1.9	0.0	22.8	3.8	24.5	11.7	12.5	6.3	7.6	12.1	6.5	3.3
Cycle Q Clear(g_c), s	1.9	0.0	22.8	3.8	24.5	11.7	12.5	6.3	7.6	12.1	6.5	3.3
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	0	821	367	881	747	388	407	182	379	206	175
V/C Ratio(X)	0.23	0.00	0.65	0.34	0.67	0.38	0.66	0.57	0.68	0.65	0.62	0.33
Avail Cap(c_a), veh/h	569	0	821	617	881	747	479	1410	629	478	742	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	21.7	16.3	20.6	17.2	32.7	42.3	42.9	32.8	42.8	41.4
Incr Delay (d2), s/veh	0.4	0.0	4.0	0.5	4.0	1.5	2.3	1.3	4.5	2.1	3.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	10.4	1.5	11.2	4.5	5.6	2.8	3.2	5.3	3.2	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	0.0	25.7	16.9	24.6	18.7	35.0	43.6	47.3	34.9	45.8	42.5
LnGrp LOS	B	A	C	B	C	B	D	D	D	C	D	D
Approach Vol, veh/h		596			1000			613			430	
Approach Delay, s/veh		24.8			21.9			40.8			39.1	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	53.5	20.4	17.6	11.8	51.0	20.8	17.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	20.0	45.0	20.0	40.0	20.0	45.0	20.0	40.0				
Max Q Clear Time (g_c+I1), s	3.9	26.5	14.1	9.6	5.8	24.8	14.5	8.5				
Green Ext Time (p_c), s	0.1	4.9	0.4	2.0	0.2	3.5	0.4	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			29.8									
HCM 6th LOS			C									

Lanes, Volumes, Timings
3152: Johnson St & N 46th Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	361	32	178	334	78	48	416	170	160	378	87
Future Volume (vph)	99	361	32	178	334	78	48	416	170	160	378	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	300		0	250		250	130		130
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.988			0.972			0.956				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1840	0	1770	1811	0	1770	3383	0	1770	3539	1583
Flt Permitted	0.364			0.326			0.511			0.142		
Satd. Flow (perm)	678	1840	0	607	1811	0	952	3383	0	265	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			10			41				119
Link Speed (mph)		30			30			30				30
Link Distance (ft)		688			719			624				482
Travel Time (s)		15.6			16.3			14.2				11.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	392	35	193	363	85	52	452	185	174	411	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	427	0	193	448	0	52	637	0	174	411	95
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		8

Lanes, Volumes, Timings
3152: Johnson St & N 46th Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0		4.0	6.0		4.0	6.0	6.0
Minimum Split (s)	11.0	37.0		11.0	37.0		11.0	27.0		11.0	27.0	27.0
Total Split (s)	22.0	56.0		22.0	56.0		24.0	36.0		24.0	36.0	36.0
Total Split (%)	15.9%	40.6%		15.9%	40.6%		17.4%	26.1%		17.4%	26.1%	26.1%
Maximum Green (s)	16.0	50.0		16.0	50.0		18.0	30.0		18.0	30.0	30.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		24.0			24.0			14.0			14.0	14.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effect Green (s)	67.2	59.0		74.1	62.5		36.7	30.1		49.4	38.9	38.9
Actuated g/C Ratio	0.49	0.43		0.54	0.45		0.27	0.22		0.36	0.28	0.28
v/c Ratio	0.27	0.54		0.46	0.54		0.18	0.83		0.73	0.41	0.18
Control Delay	18.3	34.6		20.3	31.8		29.2	57.8		48.0	41.5	3.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	18.3	34.6		20.3	31.8		29.2	57.8		48.0	41.5	3.8
LOS	B	C		C	C		C	E		D	D	A
Approach Delay		31.4			28.4			55.6			37.9	
Approach LOS		C			C			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 38.9

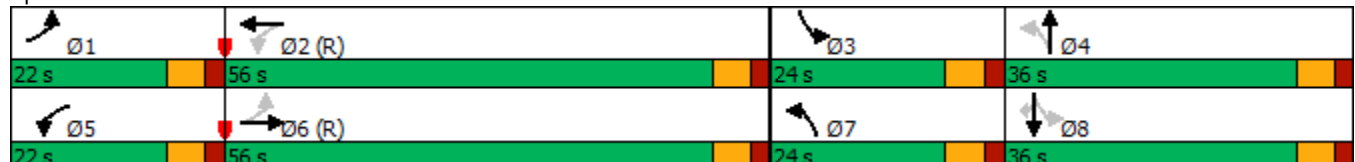
Intersection LOS: D

Intersection Capacity Utilization 76.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3152: Johnson St & N 46th Ave



Queues

3152: Johnson St & N 46th Ave

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	108	427	193	448	52	637	174	411	95
v/c Ratio	0.27	0.54	0.46	0.54	0.18	0.83	0.73	0.41	0.18
Control Delay	18.3	34.6	20.3	31.8	29.2	57.8	48.0	41.5	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	34.6	20.3	31.8	29.2	57.8	48.0	41.5	3.8
Queue Length 50th (ft)	45	284	85	285	30	268	109	160	0
Queue Length 95th (ft)	85	447	144	446	57	337	157	202	26
Internal Link Dist (ft)		608		639		544		402	
Turn Bay Length (ft)	220		300		250		130		130
Base Capacity (vph)	491	796	470	825	434	807	291	997	531
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.54	0.41	0.54	0.12	0.79	0.60	0.41	0.18
Intersection Summary									

HCM 6th Signalized Intersection Summary 3152: Johnson St & N 46th Ave

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	361	32	178	334	78	48	416	170	160	378	87
Future Volume (veh/h)	99	361	32	178	334	78	48	416	170	160	378	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	108	392	35	193	363	85	52	452	185	174	411	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	433	780	70	467	713	167	257	502	204	230	927	414
Arrive On Green	0.05	0.46	0.46	0.07	0.49	0.49	0.03	0.20	0.20	0.09	0.26	0.26
Sat Flow, veh/h	1781	1692	151	1781	1465	343	1781	2466	1001	1781	3554	1585
Grp Volume(v), veh/h	108	0	427	193	0	448	52	325	312	174	411	95
Grp Sat Flow(s),veh/h/ln	1781	0	1843	1781	0	1809	1781	1777	1690	1781	1777	1585
Q Serve(g_s), s	4.4	0.0	22.4	7.8	0.0	23.3	3.2	24.6	24.9	10.3	13.3	6.5
Cycle Q Clear(g_c), s	4.4	0.0	22.4	7.8	0.0	23.3	3.2	24.6	24.9	10.3	13.3	6.5
Prop In Lane	1.00		0.08	1.00		0.19	1.00		0.59	1.00		1.00
Lane Grp Cap(c), veh/h	433	0	849	467	0	880	257	362	344	230	927	414
V/C Ratio(X)	0.25	0.00	0.50	0.41	0.00	0.51	0.20	0.90	0.91	0.76	0.44	0.23
Avail Cap(c_a), veh/h	558	0	849	545	0	880	431	386	367	303	927	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	0.0	26.1	19.2	0.0	24.2	41.6	53.5	53.7	39.7	42.6	40.1
Incr Delay (d2), s/veh	0.1	0.0	2.1	0.2	0.0	2.1	0.1	22.0	24.7	5.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	10.4	3.3	0.0	10.5	1.4	13.2	12.9	4.9	6.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	0.0	28.2	19.4	0.0	26.3	41.7	75.6	78.3	44.7	42.9	40.4
LnGrp LOS	B	A	C	B	A	C	D	E	E	D	D	D
Approach Vol, veh/h	535		641			689			680			
Approach Delay, s/veh	26.5		24.2			74.3			43.0			
Approach LOS	C		C			E			D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	73.2	18.4	34.1	15.9	69.6	10.5	42.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	16.0	50.0	18.0	30.0	16.0	50.0	18.0	30.0				
Max Q Clear Time (g_c+I1), s	6.4	25.3	12.3	26.9	9.8	24.4	5.2	15.3				
Green Ext Time (p_c), s	0.1	3.0	0.1	1.2	0.1	2.8	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay			43.3									
HCM 6th LOS			D									

Lanes, Volumes, Timings
3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	467	96	191	417	137	208	486	200	106	330	312
Future Volume (vph)	215	467	96	191	417	137	208	486	200	106	330	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.293			0.231			0.295			0.330		
Satd. Flow (perm)	546	1863	1583	430	1863	1583	550	3539	1583	615	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			110			149			217			339
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	234	508	104	208	453	149	226	528	217	115	359	339
Shared Lane Traffic (%)												
Lane Group Flow (vph)	234	508	104	208	453	149	226	528	217	115	359	339
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8

Synchro 11 Report

Existing AM Peak

Lanes, Volumes, Timings
3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	42.0	42.0	11.0	42.0	42.0	11.0	30.0	30.0	11.0	30.0	30.0
Total Split (s)	26.0	51.0	51.0	26.0	51.0	51.0	26.0	46.0	46.0	26.0	46.0	46.0
Total Split (%)	17.4%	34.2%	34.2%	17.4%	34.2%	34.2%	17.4%	30.9%	30.9%	17.4%	30.9%	30.9%
Maximum Green (s)	20.0	45.0	45.0	20.0	45.0	45.0	20.0	40.0	40.0	20.0	40.0	40.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		29.0	29.0		29.0	29.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	59.8	45.7	45.7	60.1	45.8	45.8	42.1	25.8	25.8	30.8	20.0	20.0
Actuated g/C Ratio	0.49	0.38	0.38	0.50	0.38	0.38	0.35	0.21	0.21	0.25	0.17	0.17
v/c Ratio	0.57	0.72	0.16	0.56	0.64	0.22	0.63	0.70	0.43	0.44	0.62	0.62
Control Delay	21.7	41.6	5.7	21.9	38.3	5.6	37.2	49.7	7.9	33.2	52.2	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	41.6	5.7	21.9	38.3	5.6	37.2	49.7	7.9	33.2	52.2	10.1
LOS	C	D	A	C	D	A	D	D	A	C	D	B
Approach Delay		31.7			28.1			37.5			32.0	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 149

Actuated Cycle Length: 120.9

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 32.5

Intersection LOS: C

Intersection Capacity Utilization 75.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3150: Johnson St & N Park Ave

			
Ø1	Ø2	Ø3	Ø4
26 s	51 s	26 s	46 s
			
Ø5	Ø6	Ø7	Ø8
26 s	51 s	26 s	46 s

Queues

3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	508	104	208	453	149	226	528	217	115	359	339
v/c Ratio	0.57	0.72	0.16	0.56	0.64	0.22	0.63	0.70	0.43	0.44	0.62	0.62
Control Delay	21.7	41.6	5.7	21.9	38.3	5.6	37.2	49.7	7.9	33.2	52.2	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	41.6	5.7	21.9	38.3	5.6	37.2	49.7	7.9	33.2	52.2	10.1
Queue Length 50th (ft)	92	336	0	80	286	0	128	200	0	61	138	0
Queue Length 95th (ft)	171	#606	39	152	498	49	207	284	65	110	202	85
Internal Link Dist (ft)		926			648			487			382	
Turn Bay Length (ft)	250		235	200		340	175		190	180		200
Base Capacity (vph)	494	704	666	453	706	692	397	1184	673	394	1184	755
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.72	0.16	0.46	0.64	0.22	0.57	0.45	0.32	0.29	0.30	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3150: Johnson St & N Park Ave

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	467	96	191	417	137	208	486	200	106	330	312
Future Volume (veh/h)	215	467	96	191	417	137	208	486	200	106	330	312
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	508	104	208	453	149	226	528	217	115	359	339
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	359	682	578	324	664	563	372	1032	460	290	868	387
Arrive On Green	0.10	0.36	0.36	0.09	0.36	0.36	0.11	0.29	0.29	0.06	0.24	0.24
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	234	508	104	208	453	149	226	528	217	115	359	339
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	10.4	30.0	5.7	9.3	26.1	8.5	11.6	15.7	14.3	6.0	10.8	26.1
Cycle Q Clear(g_c), s	10.4	30.0	5.7	9.3	26.1	8.5	11.6	15.7	14.3	6.0	10.8	26.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	359	682	578	324	664	563	372	1032	460	290	868	387
V/C Ratio(X)	0.65	0.75	0.18	0.64	0.68	0.26	0.61	0.51	0.47	0.40	0.41	0.88
Avail Cap(c_a), veh/h	460	682	578	441	664	563	457	1122	500	457	1122	500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	35.1	27.4	26.4	34.8	29.1	29.8	37.5	37.0	32.9	40.3	46.0
Incr Delay (d2), s/veh	2.1	7.3	0.7	2.1	5.6	1.1	1.6	0.4	0.8	0.9	0.3	13.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	15.0	2.3	4.1	12.9	3.4	5.2	6.9	5.6	2.7	4.8	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	42.4	28.1	28.5	40.3	30.2	31.4	37.9	37.7	33.8	40.6	59.2
LnGrp LOS	C	D	C	C	D	C	C	D	D	C	D	E
Approach Vol, veh/h		846			810			971			813	
Approach Delay, s/veh		36.5			35.4			36.3			47.4	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.8	51.0	14.1	42.8	17.6	52.2	20.0	36.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	20.0	45.0	20.0	40.0	20.0	45.0	20.0	40.0				
Max Q Clear Time (g_c+I1), s	12.4	28.1	8.0	17.7	11.3	32.0	13.6	28.1				
Green Ext Time (p_c), s	0.4	3.1	0.2	4.4	0.4	3.0	0.3	2.9				
Intersection Summary												
HCM 6th Ctrl Delay			38.8									
HCM 6th LOS			D									

Lanes, Volumes, Timings
11: N 35 Ave & Garfield St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	1	83	24	2	11	40	126	1	4	204	9
Future Volume (vph)	89	1	83	24	2	11	40	126	1	4	204	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.935			0.959			0.999			0.994	
Flt Protected		0.975			0.969			0.988			0.999	
Satd. Flow (prot)	0	1698	0	0	1731	0	0	1839	0	0	1850	0
Flt Permitted		0.975			0.969			0.988			0.999	
Satd. Flow (perm)	0	1698	0	0	1731	0	0	1839	0	0	1850	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		448			432			249			584	
Travel Time (s)		10.2			9.8			5.7			13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	97	1	90	26	2	12	43	137	1	4	222	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	188	0	0	40	0	0	181	0	0	236	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization 41.5% ICU Level of Service A												
Analysis Period (min) 15												

HCM 6th Roundabout
11: N 35 Ave & Garfield St

Intersection				
Intersection Delay, s/veh	4.6			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	188	40	181	236
Demand Flow Rate, veh/h	192	41	185	240
Vehicles Circulating, veh/h	257	283	104	73
Vehicles Exiting, veh/h	56	6	345	251
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.1	3.9	4.2	4.5
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	192	41	185	240
Cap Entry Lane, veh/h	1062	1034	1241	1281
Entry HV Adj Factor	0.979	0.975	0.980	0.982
Flow Entry, veh/h	188	40	181	236
Cap Entry, veh/h	1039	1008	1216	1257
V/C Ratio	0.181	0.040	0.149	0.187
Control Delay, s/veh	5.1	3.9	4.2	4.5
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1

Lanes, Volumes, Timings
14: N Park Rd & Garfield St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	0	0	3	2	953	2	5	957	5
Future Volume (vph)	5	1	5	0	0	3	2	953	2	5	957	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.939			0.865						0.999	
Flt Protected		0.978										
Satd. Flow (prot)	0	1711	0	0	1611	0	0	3539	0	0	3536	0
Flt Permitted		0.978										
Satd. Flow (perm)	0	1711	0	0	1611	0	0	3539	0	0	3536	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		497			365			517			589	
Travel Time (s)		11.3			8.3			11.8			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1	5	0	0	3	2	1036	2	5	1040	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	3	0	0	1040	0	0	1050	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	41.9%						ICU Level of Service A					
Analysis Period (min)	15											

HCM 6th TWSC
14: N Park Rd & Garfield St

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↑			↕↑	
Traffic Vol, veh/h	5	1	5	0	0	3	2	953	2	5	957	5
Future Vol, veh/h	5	1	5	0	0	3	2	953	2	5	957	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1	5	0	0	3	2	1036	2	5	1040	5
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1575	2095	523	1572	2096	519	1045	0	0	1038	0	0
Stage 1	1053	1053	-	1041	1041	-	-	-	-	-	-	-
Stage 2	522	1042	-	531	1055	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	74	52	499	74	51	502	661	-	-	665	-	-
Stage 1	242	301	-	246	305	-	-	-	-	-	-	-
Stage 2	506	305	-	500	301	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	72	51	499	71	50	502	661	-	-	665	-	-
Mov Cap-2 Maneuver	72	51	-	71	50	-	-	-	-	-	-	-
Stage 1	240	296	-	244	303	-	-	-	-	-	-	-
Stage 2	499	303	-	484	296	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	41.3		12.2		0		0.1					
HCM LOS	E		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	661	-	-	111	502	665	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.108	0.006	0.008	-	-				
HCM Control Delay (s)	10.5	0	-	41.3	12.2	10.5	-	-				
HCM Lane LOS	B	A	-	E	B	B	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0	-	-				

Lanes, Volumes, Timings
3495: Hospital Office Entrance & N 35 Ave

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	294	114	116	305	30
Future Volume (vph)	50	294	114	116	305	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.560			
Satd. Flow (perm)	1770	1583	1043	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		320				33
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	320	124	126	332	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	320	124	126	332	33
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6

Existing PM Peak

Synchro 11 Report

Lanes, Volumes, Timings
3495: Hospital Office Entrance & N 35 Ave

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	28.0	28.0	28.0	28.0
Total Split (s)	31.0	31.0	41.0	41.0	41.0	41.0
Total Split (%)	43.1%	43.1%	56.9%	56.9%	56.9%	56.9%
Maximum Green (s)	25.0	25.0	35.0	35.0	35.0	35.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	10.5	10.5	35.5	35.5	35.5	35.5
Actuated g/C Ratio	0.18	0.18	0.61	0.61	0.61	0.61
v/c Ratio	0.17	0.58	0.19	0.11	0.29	0.03
Control Delay	21.2	7.8	6.2	5.2	6.4	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.2	7.8	6.2	5.2	6.4	2.2
LOS	C	A	A	A	A	A
Approach Delay	9.8			5.7	6.0	
Approach LOS	A			A	A	
Intersection Summary						
Area Type:	Other					
Cycle Length: 72						
Actuated Cycle Length: 58						
Natural Cycle: 60						
Control Type: Actuated-Uncoordinated						
Maximum v/c Ratio: 0.58						
Intersection Signal Delay: 7.3				Intersection LOS: A		
Intersection Capacity Utilization 51.9%				ICU Level of Service A		
Analysis Period (min) 15						

Splits and Phases: 3495: Hospital Office Entrance & N 35 Ave

	
Ø2	Ø4
41 s	31 s
	
Ø6	
41 s	

Queues

3495: Hospital Office Entrance & N 35 Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	54	320	124	126	332	33
v/c Ratio	0.17	0.58	0.19	0.11	0.29	0.03
Control Delay	21.2	7.8	6.2	5.2	6.4	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.2	7.8	6.2	5.2	6.4	2.2
Queue Length 50th (ft)	16	0	16	15	45	0
Queue Length 95th (ft)	41	56	40	36	91	8
Internal Link Dist (ft)	276			307	169	
Turn Bay Length (ft)	140	140	220			120
Base Capacity (vph)	763	864	637	1138	1138	980
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.37	0.19	0.11	0.29	0.03
Intersection Summary						

HCM Signalized Intersection Capacity Analysis

3495: Hospital Office Entrance & N 35 Ave

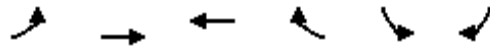


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	294	114	116	305	30
Future Volume (vph)	50	294	114	116	305	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.56	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1044	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	320	124	126	332	33
RTOR Reduction (vph)	0	262	0	0	0	13
Lane Group Flow (vph)	54	58	124	126	332	20
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	10.5	10.5	35.4	35.4	35.4	35.4
Effective Green, g (s)	10.5	10.5	35.4	35.4	35.4	35.4
Actuated g/C Ratio	0.18	0.18	0.61	0.61	0.61	0.61
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	320	287	638	1139	1139	967
v/s Ratio Prot				0.07	c0.18	
v/s Ratio Perm	0.03	c0.04	0.12			0.01
v/c Ratio	0.17	0.20	0.19	0.11	0.29	0.02
Uniform Delay, d1	20.0	20.1	5.0	4.7	5.3	4.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.3	0.7	0.2	0.6	0.0
Delay (s)	20.3	20.5	5.6	4.9	6.0	4.5
Level of Service	C	C	A	A	A	A
Approach Delay (s)	20.5			5.3	5.8	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			11.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.27			
Actuated Cycle Length (s)			57.9		Sum of lost time (s)	12.0
Intersection Capacity Utilization			51.9%		ICU Level of Service	A
Analysis Period (min)			15			

c Critical Lane Group

Lanes, Volumes, Timings

23: Johnson Street & Emergency Entrance



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	62	488	686	55	46	111
Future Volume (vph)	62	488	686	55	46	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			220	52	66
Storage Lanes	0			1	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1863	1583	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		306	685		513	
Travel Time (s)		7.0	15.6		11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	530	746	60	50	121
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	530	746	60	50	121
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	52.9%			ICU Level of Service A		
Analysis Period (min)	15					

HCM 6th TWSC

23: Johnson Street & Emergency Entrance

Intersection

Int Delay, s/veh 3.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	488	686	55	46	111
Future Vol, veh/h	62	488	686	55	46	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	530	746	60	50	121

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	806	0	0 1410 746
Stage 1	-	-	- - 746 -
Stage 2	-	-	- - 664 -
Critical Hdwy	4.12	-	- - 6.42 6.22
Critical Hdwy Stg 1	-	-	- - 5.42 -
Critical Hdwy Stg 2	-	-	- - 5.42 -
Follow-up Hdwy	2.218	-	- - 3.518 3.318
Pot Cap-1 Maneuver	819	-	- - 153 413
Stage 1	-	-	- - 469 -
Stage 2	-	-	- - 512 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	819	-	- - 140 413
Mov Cap-2 Maneuver	-	-	- - 140 -
Stage 1	-	-	- - 431 -
Stage 2	-	-	- - 512 -

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	25.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	819	-	-	-	140	413
HCM Lane V/C Ratio	0.082	-	-	-	0.357	0.292
HCM Control Delay (s)	9.8	-	-	-	44.4	17.3
HCM Lane LOS	A	-	-	-	E	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.5	1.2

Lanes, Volumes, Timings
21: Johnson St & Employee Garage

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	489	5	8	717	10	2	0	58	0	0	461
Future Volume (vph)	8	489	5	8	717	10	2	0	58	0	0	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270		0	0		120	0		0	130		120
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.998			0.869				0.850
Flt Protected	0.950				0.999			0.998				
Satd. Flow (prot)	1770	1861	0	0	3529	0	0	1615	0	1863	0	1583
Flt Permitted	0.950				0.999			0.998				
Satd. Flow (perm)	1770	1861	0	0	3529	0	0	1615	0	1863	0	1583
Link Speed (mph)		30			30			30				30
Link Distance (ft)		665			306			73				508
Travel Time (s)		15.1			7.0			1.7				11.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	532	5	9	779	11	2	0	63	0	0	501
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	537	0	0	799	0	0	65	0	0	0	501
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 62.6%				ICU Level of Service B								
Analysis Period (min) 15												

HCM 6th TWSC
21: Johnson St & Employee Garage

Intersection												
Int Delay, s/veh	9.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	489	5	8	717	10	2	0	58	0	0	461
Future Vol, veh/h	8	489	5	8	717	10	2	0	58	0	0	461
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	270	-	-	-	-	120	-	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	532	5	9	779	11	2	0	63	0	0	501
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	790	0	0	537	0	0	961	1361	535	1387	-	395
Stage 1	-	-	-	-	-	-	553	553	-	803	-	-
Stage 2	-	-	-	-	-	-	408	808	-	584	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	7.33	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.53	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	6.13	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	-	3.319
Pot Cap-1 Maneuver	828	-	-	1029	-	-	223	148	544	111	0	605
Stage 1	-	-	-	-	-	-	516	513	-	344	0	-
Stage 2	-	-	-	-	-	-	592	393	-	497	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	828	-	-	1029	-	-	37	144	544	96	-	605
Mov Cap-2 Maneuver	-	-	-	-	-	-	37	144	-	96	-	-
Stage 1	-	-	-	-	-	-	510	507	-	340	-	-
Stage 2	-	-	-	-	-	-	100	387	-	435	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			16.7			33.2		
HCM LOS							C			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	373	828	-	-	1029	-	-	-	605			
HCM Lane V/C Ratio	0.175	0.011	-	-	0.008	-	-	-	0.828			
HCM Control Delay (s)	16.7	9.4	-	-	8.5	-	-	0	33.2			
HCM Lane LOS	C	A	-	-	A	-	-	A	D			
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	-	8.7			

Lanes, Volumes, Timings

3151: N 35th Ave & Johnson Street/Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	405	111	151	468	130	73	64	108	319	177	113
Future Volume (vph)	40	405	111	151	468	130	73	64	108	319	177	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		700	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.968				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1803	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.377			0.191			0.637			0.477		
Satd. Flow (perm)	702	1803	0	356	1863	1583	1187	3539	1583	889	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				141			127			127
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	440	121	164	509	141	79	70	117	347	192	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	561	0	164	509	141	79	70	117	347	192	123
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8

Synchro 11 Report

Existing PM Peak

Lanes, Volumes, Timings

3151: N 35th Ave & Johnson Street/Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	31.0		11.0	31.0	31.0	11.0	31.0	31.0	11.0	33.0	33.0
Total Split (s)	21.0	46.0		21.0	46.0	46.0	21.0	41.0	41.0	21.0	41.0	41.0
Total Split (%)	16.3%	35.7%		16.3%	35.7%	35.7%	16.3%	31.8%	31.8%	16.3%	31.8%	31.8%
Maximum Green (s)	15.0	40.0		15.0	40.0	40.0	15.0	35.0	35.0	15.0	35.0	35.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0			18.0	18.0		18.0	18.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effect Green (s)	46.9	40.2		56.9	49.8	49.8	20.1	11.0	11.0	31.2	19.7	19.7
Actuated g/C Ratio	0.46	0.40		0.56	0.49	0.49	0.20	0.11	0.11	0.31	0.19	0.19
v/c Ratio	0.11	0.78		0.46	0.56	0.17	0.28	0.18	0.41	0.86	0.53	0.30
Control Delay	12.6	36.8		16.0	23.9	4.0	28.1	41.8	10.7	52.4	44.9	8.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	36.8		16.0	23.9	4.0	28.1	41.8	10.7	52.4	44.9	8.5
LOS	B	D		B	C	A	C	D	B	D	D	A
Approach Delay		35.1			18.8			24.0			42.1	
Approach LOS		D			B			C			D	

Intersection Summary

Area Type: Other

Cycle Length: 129

Actuated Cycle Length: 101.6

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 30.2

Intersection LOS: C

Intersection Capacity Utilization 79.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3151: N 35th Ave & Johnson Street/Johnson St

			
Ø1	Ø2	Ø3	Ø4
21 s	46 s	21 s	41 s
			
Ø5	Ø6	Ø7	Ø8
21 s	46 s	21 s	41 s

Queues

3151: N 35th Ave & Johnson Street/Johnson St

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	43	561	164	509	141	79	70	117	347	192	123
v/c Ratio	0.11	0.78	0.46	0.56	0.17	0.28	0.18	0.41	0.86	0.53	0.30
Control Delay	12.6	36.8	16.0	23.9	4.0	28.1	41.8	10.7	52.4	44.9	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	36.8	16.0	23.9	4.0	28.1	41.8	10.7	52.4	44.9	8.5
Queue Length 50th (ft)	11	293	46	238	0	36	21	0	188	115	0
Queue Length 95th (ft)	33	#588	99	427	38	74	44	43	#348	202	47
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		700	160		150	240		500
Base Capacity (vph)	539	720	411	913	847	391	1226	631	404	645	631
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.78	0.40	0.56	0.17	0.20	0.06	0.19	0.86	0.30	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3151: N 35th Ave & Johnson Street/Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	405	111	151	468	130	73	64	108	319	177	113
Future Volume (veh/h)	40	405	111	151	468	130	73	64	108	319	177	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	440	121	164	509	141	79	70	117	347	192	123
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	331	590	162	338	867	734	278	358	160	453	381	323
Arrive On Green	0.03	0.42	0.42	0.07	0.46	0.46	0.05	0.10	0.10	0.16	0.20	0.20
Sat Flow, veh/h	1781	1412	388	1781	1870	1585	1781	3554	1585	1781	1870	1585
Grp Volume(v), veh/h	43	0	561	164	509	141	79	70	117	347	192	123
Grp Sat Flow(s),veh/h/ln	1781	0	1800	1781	1870	1585	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	1.3	0.0	25.2	4.9	19.2	5.0	3.8	1.7	6.9	15.0	8.7	6.4
Cycle Q Clear(g_c), s	1.3	0.0	25.2	4.9	19.2	5.0	3.8	1.7	6.9	15.0	8.7	6.4
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	331	0	753	338	867	734	278	358	160	453	381	323
V/C Ratio(X)	0.13	0.00	0.75	0.49	0.59	0.19	0.28	0.20	0.73	0.77	0.50	0.38
Avail Cap(c_a), veh/h	560	0	753	486	867	734	462	1300	580	453	684	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	23.5	17.6	18.9	15.1	35.8	39.5	41.8	31.5	33.8	32.9
Incr Delay (d2), s/veh	0.2	0.0	6.6	1.1	2.9	0.6	0.6	0.3	6.4	7.6	1.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	11.6	2.0	8.7	1.9	1.7	0.8	2.9	8.0	4.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	0.0	30.2	18.7	21.8	15.7	36.4	39.7	48.1	39.1	34.8	33.6
LnGrp LOS	B	A	C	B	C	B	D	D	D	D	C	C
Approach Vol, veh/h		604			814			266			662	
Approach Delay, s/veh		29.2			20.2			42.4			36.9	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	50.3	21.0	15.6	13.1	46.0	11.1	25.5				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	15.0	40.0	15.0	35.0	15.0	40.0	15.0	35.0				
Max Q Clear Time (g_c+I1), s	3.3	21.2	17.0	8.9	6.9	27.2	5.8	10.7				
Green Ext Time (p_c), s	0.0	3.7	0.0	0.8	0.3	3.1	0.1	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			29.7									
HCM 6th LOS			C									

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	315	45	158	499	102	48	403	54	66	393	61
Future Volume (vph)	47	315	45	158	499	102	48	403	54	66	393	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	300		0	250		250	130		130
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.981			0.975			0.982				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1827	0	1770	1816	0	1770	3476	0	1770	3539	1583
Flt Permitted	0.196			0.334			0.503			0.191		
Satd. Flow (perm)	365	1827	0	622	1816	0	937	3476	0	356	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			8			10				119
Link Speed (mph)		30			30			30				30
Link Distance (ft)		679			697			695				495
Travel Time (s)		15.4			15.8			15.8				11.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	342	49	172	542	111	52	438	59	72	427	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	391	0	172	653	0	52	497	0	72	427	66
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		8

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0		4.0	6.0		4.0	6.0	6.0
Minimum Split (s)	11.0	37.0		11.0	37.0		11.0	27.0		11.0	27.0	27.0
Total Split (s)	22.0	56.0		22.0	56.0		24.0	36.0		24.0	36.0	36.0
Total Split (%)	15.9%	40.6%		15.9%	40.6%		17.4%	26.1%		17.4%	26.1%	26.1%
Maximum Green (s)	16.0	50.0		16.0	50.0		18.0	30.0		18.0	30.0	30.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Min		None	C-Min		None	None		Max	None	None
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		24.0			24.0			14.0			14.0	14.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effect Green (s)	62.8	56.9		75.0	65.3		32.9	24.8		50.9	39.1	39.1
Actuated g/C Ratio	0.46	0.41		0.54	0.47		0.24	0.18		0.37	0.28	0.28
v/c Ratio	0.23	0.52		0.39	0.76		0.19	0.79		0.21	0.43	0.12
Control Delay	18.4	33.7		18.9	37.5		30.8	61.9		30.1	42.8	0.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	18.4	33.7		18.9	37.5		30.8	61.9		30.1	42.8	0.5
LOS	B	C		B	D		C	E		C	D	A
Approach Delay		31.9			33.6			59.0			36.3	
Approach LOS		C			C			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 39.8

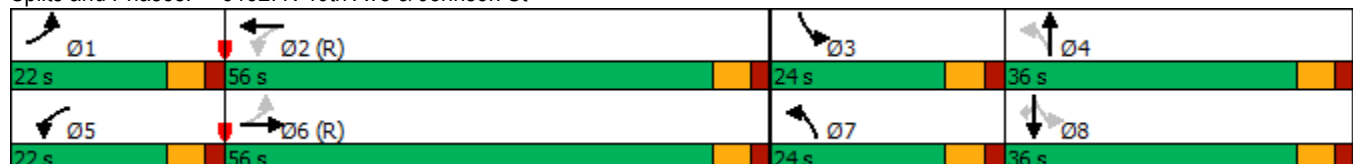
Intersection LOS: D

Intersection Capacity Utilization 72.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3152: N 46th Ave & Johnson St



Queues

3152: N 46th Ave & Johnson St



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	51	391	172	653	52	497	72	427	66
v/c Ratio	0.23	0.52	0.39	0.76	0.19	0.79	0.21	0.43	0.12
Control Delay	18.4	33.7	18.9	37.5	30.8	61.9	30.1	42.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	33.7	18.9	37.5	30.8	61.9	30.1	42.8	0.5
Queue Length 50th (ft)	20	250	73	470	31	221	43	171	0
Queue Length 95th (ft)	44	388	124	#713	59	274	75	220	1
Internal Link Dist (ft)		599		617		615		415	
Turn Bay Length (ft)	220		300		250		130		130
Base Capacity (vph)	355	756	471	863	399	763	336	1003	534
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.52	0.37	0.76	0.13	0.65	0.21	0.43	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3152: N 46th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	315	45	158	499	102	48	403	54	66	393	61
Future Volume (veh/h)	47	315	45	158	499	102	48	403	54	66	393	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	342	49	172	542	111	52	438	59	72	427	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	745	107	486	761	156	258	520	70	311	930	415
Arrive On Green	0.03	0.47	0.47	0.07	0.51	0.51	0.03	0.16	0.16	0.13	0.26	0.26
Sat Flow, veh/h	1781	1600	229	1781	1506	308	1781	3149	422	1781	3554	1585
Grp Volume(v), veh/h	51	0	391	172	0	653	52	246	251	72	427	66
Grp Sat Flow(s),veh/h/ln	1781	0	1829	1781	0	1815	1781	1777	1794	1781	1777	1585
Q Serve(g_s), s	2.1	0.0	20.1	6.8	0.0	38.4	3.3	18.5	18.7	4.0	13.9	4.4
Cycle Q Clear(g_c), s	2.1	0.0	20.1	6.8	0.0	38.4	3.3	18.5	18.7	4.0	13.9	4.4
Prop In Lane	1.00		0.13	1.00		0.17	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	275	0	851	486	0	917	258	293	296	311	930	415
V/C Ratio(X)	0.19	0.00	0.46	0.35	0.00	0.71	0.20	0.84	0.85	0.23	0.46	0.16
Avail Cap(c_a), veh/h	436	0	851	577	0	917	430	386	390	311	930	415
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	25.1	18.1	0.0	26.4	45.6	55.8	55.9	35.9	42.8	39.2
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.4	0.0	4.7	0.4	11.9	12.6	1.7	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	9.2	2.8	0.0	17.6	1.5	9.3	9.5	1.9	6.2	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	0.0	26.9	18.5	0.0	31.1	46.0	67.7	68.5	37.7	43.1	39.4
LnGrp LOS	C	A	C	B	A	C	D	E	E	D	D	D
Approach Vol, veh/h	442			825			549			565		
Approach Delay, s/veh	26.4			28.5			66.0			42.0		
Approach LOS	C			C			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	75.7	24.0	28.8	15.0	70.2	10.7	42.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	16.0	50.0	18.0	30.0	16.0	50.0	18.0	30.0				
Max Q Clear Time (g_c+l1), s	4.1	40.4	6.0	20.7	8.8	22.1	5.3	15.9				
Green Ext Time (p_c), s	0.0	3.2	0.1	2.0	0.3	2.6	0.1	2.6				
Intersection Summary												
HCM 6th Ctrl Delay	39.9											
HCM 6th LOS	D											

Lanes, Volumes, Timings
3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	266	446	144	205	407	171	112	520	241	127	606	234
Future Volume (vph)	266	446	144	205	407	171	112	520	241	127	606	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		325	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.251			0.245			0.185			0.247		
Satd. Flow (perm)	468	1863	1583	456	1863	1583	345	3539	1583	460	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			157			186			251			218
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	289	485	157	223	442	186	122	565	262	138	659	254
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	485	157	223	442	186	122	565	262	138	659	254
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8

Lanes, Volumes, Timings
3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	42.0	42.0	11.0	42.0	42.0	11.0	30.0	30.0	11.0	30.0	30.0
Total Split (s)	26.0	51.0	51.0	26.0	51.0	51.0	26.0	46.0	46.0	26.0	46.0	46.0
Total Split (%)	17.4%	34.2%	34.2%	17.4%	34.2%	34.2%	17.4%	30.9%	30.9%	17.4%	30.9%	30.9%
Maximum Green (s)	20.0	45.0	45.0	20.0	45.0	45.0	20.0	40.0	40.0	20.0	40.0	40.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		29.0	29.0		29.0	29.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	65.1	47.6	47.6	60.6	45.4	45.4	43.5	31.7	31.7	44.4	32.1	32.1
Actuated g/C Ratio	0.50	0.36	0.36	0.46	0.35	0.35	0.33	0.24	0.24	0.34	0.25	0.25
v/c Ratio	0.71	0.72	0.23	0.61	0.69	0.28	0.50	0.66	0.46	0.50	0.76	0.46
Control Delay	30.1	45.4	6.0	26.5	45.4	5.8	34.3	49.1	8.4	33.4	52.3	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	45.4	6.0	26.5	45.4	5.8	34.3	49.1	8.4	33.4	52.3	11.0
LOS	C	D	A	C	D	A	C	D	A	C	D	B
Approach Delay		34.0			31.8			36.0			39.9	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 149

Actuated Cycle Length: 131

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 35.6

Intersection LOS: D

Intersection Capacity Utilization 79.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3150: Johnson St & N Park Ave

 Ø1	 Ø2	 Ø3	 Ø4
26 s	51 s	26 s	46 s
 Ø5	 Ø6	 Ø7	 Ø8
26 s	51 s	26 s	46 s

Queues

3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	289	485	157	223	442	186	122	565	262	138	659	254
v/c Ratio	0.71	0.72	0.23	0.61	0.69	0.28	0.50	0.66	0.46	0.50	0.76	0.46
Control Delay	30.1	45.4	6.0	26.5	45.4	5.8	34.3	49.1	8.4	33.4	52.3	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	45.4	6.0	26.5	45.4	5.8	34.3	49.1	8.4	33.4	52.3	11.0
Queue Length 50th (ft)	137	358	0	101	331	0	69	232	7	79	278	24
Queue Length 95th (ft)	231	#605	53	177	513	56	115	308	80	128	362	102
Internal Link Dist (ft)		926			648			487			382	
Turn Bay Length (ft)	300		325	200		340	175		190	180		200
Base Capacity (vph)	437	676	675	429	645	669	349	1089	661	376	1089	638
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.72	0.23	0.52	0.69	0.28	0.35	0.52	0.40	0.37	0.61	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3150: Johnson St & N Park Ave

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	266	446	144	205	407	171	112	520	241	127	606	234
Future Volume (veh/h)	266	446	144	205	407	171	112	520	241	127	606	234
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	289	485	157	223	442	186	122	565	262	138	659	254
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	418	748	634	380	706	598	220	806	359	250	832	371
Arrive On Green	0.12	0.40	0.40	0.10	0.38	0.38	0.07	0.23	0.23	0.08	0.23	0.23
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	289	485	157	223	442	186	122	565	262	138	659	254
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	11.7	25.1	7.9	9.0	23.0	9.9	6.2	17.4	18.3	7.0	20.8	17.4
Cycle Q Clear(g_c), s	11.7	25.1	7.9	9.0	23.0	9.9	6.2	17.4	18.3	7.0	20.8	17.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	418	748	634	380	706	598	220	806	359	250	832	371
V/C Ratio(X)	0.69	0.65	0.25	0.59	0.63	0.31	0.55	0.70	0.73	0.55	0.79	0.68
Avail Cap(c_a), veh/h	506	748	634	509	706	598	396	1192	531	412	1192	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	29.0	23.8	21.9	30.3	26.2	33.8	42.4	42.7	33.0	43.0	41.7
Incr Delay (d2), s/veh	3.1	4.3	0.9	1.4	4.2	1.4	2.2	1.1	2.8	1.9	2.4	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	12.0	3.1	3.9	11.1	4.0	2.8	7.8	7.4	3.1	9.4	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	33.3	24.8	23.3	34.5	27.6	36.0	43.5	45.6	34.9	45.4	43.9
LnGrp LOS	C	C	C	C	C	C	D	D	D	C	D	D
Approach Vol, veh/h	931			851			949			1051		
Approach Delay, s/veh	29.2			30.0			43.1			43.6		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.1	51.0	15.1	33.0	17.4	53.7	14.2	33.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	20.0	45.0	20.0	40.0	20.0	45.0	20.0	40.0				
Max Q Clear Time (g_c+I1), s	13.7	25.0	9.0	20.3	11.0	27.1	8.2	22.8				
Green Ext Time (p_c), s	0.5	3.4	0.2	4.7	0.4	3.5	0.2	5.1				
Intersection Summary												
HCM 6th Ctrl Delay	36.9											
HCM 6th LOS	D											

Lanes, Volumes, Timings

11: Garfield St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	0	19	11	0	1	65	109	3	10	270	29
Future Volume (vph)	18	0	19	11	0	1	65	109	3	10	270	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.931			0.990			0.998			0.987	
Flt Protected		0.976			0.956			0.982			0.998	
Satd. Flow (prot)	0	1693	0	0	1763	0	0	1826	0	0	1835	0
Flt Permitted		0.976			0.956			0.982			0.998	
Satd. Flow (perm)	0	1693	0	0	1763	0	0	1826	0	0	1835	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		448			432			249			584	
Travel Time (s)		10.2			9.8			5.7			13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	0	21	12	0	1	71	118	3	11	293	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	0	13	0	0	192	0	0	336	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization 39.4%												
ICU Level of Service A												
Analysis Period (min) 15												

HCM 6th Roundabout
11: Garfield St

Intersection				
Intersection Delay, s/veh	4.7			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	41	13	192	336
Demand Flow Rate, veh/h	41	13	195	343
Vehicles Circulating, veh/h	322	212	31	84
Vehicles Exiting, veh/h	105	14	332	141
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.0	3.3	3.9	5.3
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	41	13	195	343
Cap Entry Lane, veh/h	994	1112	1337	1267
Entry HV Adj Factor	1.000	1.000	0.983	0.980
Flow Entry, veh/h	41	13	192	336
Cap Entry, veh/h	994	1112	1314	1241
V/C Ratio	0.041	0.012	0.146	0.271
Control Delay, s/veh	4.0	3.3	3.9	5.3
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

Lanes, Volumes, Timings
14: N Park Rd & Garfield St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	0	1	2	1	8	3	906	3	2	815	2
Future Volume (vph)	3	0	1	2	1	8	3	906	3	2	815	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.966			0.899							
Flt Protected		0.964			0.992							
Satd. Flow (prot)	0	1735	0	0	1661	0	0	3539	0	0	3539	0
Flt Permitted		0.964			0.992							
Satd. Flow (perm)	0	1735	0	0	1661	0	0	3539	0	0	3539	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		497			365			517			589	
Travel Time (s)		11.3			8.3			11.8			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	0	1	2	1	9	3	985	3	2	886	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	12	0	0	991	0	0	890	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type: Unsignalized												
Intersection Capacity Utilization 37.2%												

HCM 6th TWSC
14: N Park Rd & Garfield St

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↑			↕↑	
Traffic Vol, veh/h	3	0	1	2	1	8	3	906	3	2	815	2
Future Vol, veh/h	3	0	1	2	1	8	3	906	3	2	815	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	1	2	1	9	3	985	3	2	886	2
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1390	1885	444	1440	1885	494	888	0	0	988	0	0
Stage 1	891	891	-	993	993	-	-	-	-	-	-	-
Stage 2	499	994	-	447	892	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	102	70	561	93	70	521	758	-	-	695	-	-
Stage 1	304	359	-	263	322	-	-	-	-	-	-	-
Stage 2	522	321	-	560	358	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	98	69	561	92	69	521	758	-	-	695	-	-
Mov Cap-2 Maneuver	98	69	-	92	69	-	-	-	-	-	-	-
Stage 1	301	357	-	261	319	-	-	-	-	-	-	-
Stage 2	507	318	-	556	356	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	35.3		22.9		0		0					
HCM LOS	E		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	758	-	-	123	213	695	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.035	0.056	0.003	-	-				
HCM Control Delay (s)	9.8	0	-	35.3	22.9	10.2	-	-				
HCM Lane LOS	A	A	-	E	C	B	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-				

Lanes, Volumes, Timings

3495: N 35 Ave & Hospital Office Entrance

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	25	146	372	180	277	46
Future Volume (vph)	25	146	372	180	277	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.553			
Satd. Flow (perm)	1770	1583	1030	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		159				50
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	159	404	196	301	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	159	404	196	301	50
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Minimum Split (s)	31.0	31.0	28.0	28.0	28.0	28.0
Total Split (s)	31.0	31.0	41.0	41.0	41.0	41.0
Total Split (%)	43.1%	43.1%	56.9%	56.9%	56.9%	56.9%
Maximum Green (s)	25.0	25.0	35.0	35.0	35.0	35.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)	25.0	25.0	35.0	35.0	35.0	35.0
Actuated g/C Ratio	0.35	0.35	0.49	0.49	0.49	0.49
v/c Ratio	0.04	0.24	0.81	0.22	0.33	0.06

Lanes, Volumes, Timings

3495: N 35 Ave & Hospital Office Entrance



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	16.0	4.2	31.2	11.4	12.6	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	4.2	31.2	11.4	12.6	3.5
LOS	B	A	C	B	B	A
Approach Delay	5.9			24.8	11.3	
Approach LOS	A			C	B	

Intersection Summary

Area Type: Other

Cycle Length: 72

Actuated Cycle Length: 72

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 65

Control Type: Pretimed

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 17.5

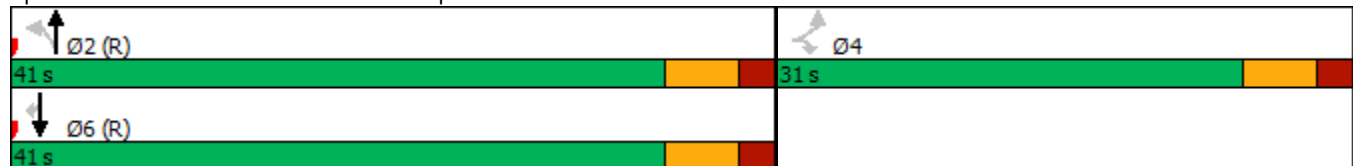
Intersection LOS: B

Intersection Capacity Utilization 58.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3495: N 35 Ave & Hospital Office Entrance



Queues

3495: N 35 Ave & Hospital Office Entrance



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	27	159	404	196	301	50
v/c Ratio	0.04	0.24	0.81	0.22	0.33	0.06
Control Delay	16.0	4.2	31.2	11.4	12.6	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	4.2	31.2	11.4	12.6	3.5
Queue Length 50th (ft)	8	0	143	47	77	0
Queue Length 95th (ft)	23	36	#306	84	129	16
Internal Link Dist (ft)	276			307	169	
Turn Bay Length (ft)	140	140	220			120
Base Capacity (vph)	614	653	500	905	905	795
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.24	0.81	0.22	0.33	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

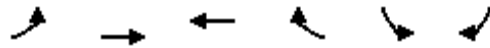
3495: N 35 Ave & Hospital Office Entrance



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	25	146	372	180	277	46
Future Volume (vph)	25	146	372	180	277	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.55	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1030	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	159	404	196	301	50
RTOR Reduction (vph)	0	104	0	0	0	26
Lane Group Flow (vph)	27	55	404	196	301	24
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	25.0	25.0	35.0	35.0	35.0	35.0
Effective Green, g (s)	25.0	25.0	35.0	35.0	35.0	35.0
Actuated g/C Ratio	0.35	0.35	0.49	0.49	0.49	0.49
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Grp Cap (vph)	614	549	500	905	905	769
v/s Ratio Prot				0.11	0.16	
v/s Ratio Perm	0.02	0.03	0.39			0.02
v/c Ratio	0.04	0.10	0.81	0.22	0.33	0.03
Uniform Delay, d1	15.6	15.9	15.7	10.6	11.3	9.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.4	13.1	0.5	1.0	0.1
Delay (s)	15.7	16.3	28.8	11.2	12.3	9.7
Level of Service	B	B	C	B	B	A
Approach Delay (s)	16.2			23.0	12.0	
Approach LOS	B			C	B	
Intersection Summary						
HCM 2000 Control Delay			18.5		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.51			
Actuated Cycle Length (s)			72.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			58.5%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings

23: Johnson Street & Emergency Entrance



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↶	↷	↶	↷
Traffic Volume (vph)	137	567	793	140	17	44
Future Volume (vph)	137	567	793	140	17	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			220	52	66
Storage Lanes	0			1	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1863	1583	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		306	685		513	
Travel Time (s)		7.0	15.6		11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	149	616	862	152	18	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	149	616	862	152	18	48
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	62.7%			ICU Level of Service B		
Analysis Period (min)	15					

HCM 6th TWSC

23: Johnson Street & Emergency Entrance

Intersection

Int Delay, s/veh 2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	137	567	793	140	17	44
Future Vol, veh/h	137	567	793	140	17	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	616	862	152	18	48

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1014	0	0 1776 862
Stage 1	-	-	- 862 -
Stage 2	-	-	- 914 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	684	-	- 91 355
Stage 1	-	-	- 414 -
Stage 2	-	-	- 391 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	684	-	- 71 355
Mov Cap-2 Maneuver	-	-	- 71 -
Stage 1	-	-	- 324 -
Stage 2	-	-	- 391 -

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	32.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	684	-	-	-	71	355
HCM Lane V/C Ratio	0.218	-	-	-	0.26	0.135
HCM Control Delay (s)	11.7	-	-	-	72.7	16.7
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.8	-	-	-	0.9	0.5

Lanes, Volumes, Timings
21: Johnson St & Employee Garage

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	274	655	27	10	578	230	0	0	3	0	0	302
Future Volume (vph)	274	655	27	10	578	230	0	0	3	0	0	302
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270		0	0		120	0		0	130		120
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.958			0.865				0.850
Flt Protected	0.950				0.999							
Satd. Flow (prot)	1770	1852	0	0	3387	0	0	1611	0	1863	0	1583
Flt Permitted	0.950				0.999							
Satd. Flow (perm)	1770	1852	0	0	3387	0	0	1611	0	1863	0	1583
Link Speed (mph)		30			30			30				30
Link Distance (ft)		665			306			73				508
Travel Time (s)		15.1			7.0			1.7				11.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	298	712	29	11	628	250	0	0	3	0	0	328
Shared Lane Traffic (%)												
Lane Group Flow (vph)	298	741	0	0	889	0	0	3	0	0	0	328
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	73.1%						ICU Level of Service D					
Analysis Period (min)	15											

HCM 6th TWSC
21: Johnson St & Employee Garage

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	274	655	27	10	578	230	0	0	3	0	0	302
Future Vol, veh/h	274	655	27	10	578	230	0	0	3	0	0	302
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	270	-	-	-	-	120	-	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	298	712	29	11	628	250	0	0	3	0	0	328
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	878	0	0	741	0	0	1659	2223	727	2099	-	439
Stage 1	-	-	-	-	-	-	1323	1323	-	775	-	-
Stage 2	-	-	-	-	-	-	336	900	-	1324	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	7.33	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.53	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	6.13	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	-	3.319
Pot Cap-1 Maneuver	767	-	-	864	-	-	71	43	423	34	0	567
Stage 1	-	-	-	-	-	-	192	225	-	358	0	-
Stage 2	-	-	-	-	-	-	652	356	-	191	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	767	-	-	864	-	-	20	26	423	23	-	567
Mov Cap-2 Maneuver	-	-	-	-	-	-	20	26	-	23	-	-
Stage 1	-	-	-	-	-	-	117	137	-	219	-	-
Stage 2	-	-	-	-	-	-	267	347	-	116	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.6			0.1			13.6			19.7		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	423	767	-	-	864	-	-	-	567			
HCM Lane V/C Ratio	0.008	0.388	-	-	0.013	-	-	-	0.579			
HCM Control Delay (s)	13.6	12.6	-	-	9.2	-	-	0	19.7			
HCM Lane LOS	B	B	-	-	A	-	-	A	C			
HCM 95th %tile Q(veh)	0	1.8	-	-	0	-	-	-	3.7			

Lanes, Volumes, Timings

3151: N 35th Ave & Johnson Street/Johnson ST

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	475	56	123	581	282	252	231	122	242	125	56
Future Volume (vph)	61	475	56	123	581	282	252	231	122	242	125	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.984				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1833	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.209			0.183			0.596			0.550		
Satd. Flow (perm)	389	1833	0	341	1863	1583	1110	3539	1583	1025	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				255			133			127
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	516	61	134	632	307	274	251	133	263	136	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	577	0	134	632	307	274	251	133	263	136	61
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8

Synchro 11 Report

Future No Build AM Peak

Lanes, Volumes, Timings

3151: N 35th Ave & Johnson Street/Johnson ST

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	31.0		11.0	31.0	31.0	11.0	31.0	31.0	11.0	33.0	33.0
Total Split (s)	21.0	46.0		21.0	46.0	46.0	21.0	41.0	41.0	21.0	41.0	41.0
Total Split (%)	16.3%	35.7%		16.3%	35.7%	35.7%	16.3%	31.8%	31.8%	16.3%	31.8%	31.8%
Maximum Green (s)	15.0	40.0		15.0	40.0	40.0	15.0	35.0	35.0	15.0	35.0	35.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0			18.0	18.0		18.0	18.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effect Green (s)	47.4	40.1		53.7	45.3	45.3	27.4	13.0	13.0	27.1	12.8	12.8
Actuated g/C Ratio	0.47	0.40		0.53	0.45	0.45	0.27	0.13	0.13	0.27	0.13	0.13
v/c Ratio	0.23	0.79		0.42	0.76	0.36	0.70	0.55	0.42	0.70	0.58	0.20
Control Delay	14.1	37.6		15.9	32.9	5.9	38.3	46.7	11.5	38.3	52.4	1.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.1	37.6		15.9	32.9	5.9	38.3	46.7	11.5	38.3	52.4	1.4
LOS	B	D		B	C	A	D	D	B	D	D	A
Approach Delay		35.1			23.1			36.1			37.6	
Approach LOS		D			C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 129

Actuated Cycle Length: 101.4

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 31.2

Intersection LOS: C

Intersection Capacity Utilization 75.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3151: N 35th Ave & Johnson Street/Johnson ST

21 s	46 s	21 s	41 s
21 s	46 s	21 s	41 s

Queues

3151: N 35th Ave & Johnson Street/Johnson ST

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	66	577	134	632	307	274	251	133	263	136	61
v/c Ratio	0.23	0.79	0.42	0.76	0.36	0.70	0.55	0.42	0.70	0.58	0.20
Control Delay	14.1	37.6	15.9	32.9	5.9	38.3	46.7	11.5	38.3	52.4	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.1	37.6	15.9	32.9	5.9	38.3	46.7	11.5	38.3	52.4	1.4
Queue Length 50th (ft)	19	320	40	351	20	138	81	0	132	84	0
Queue Length 95th (ft)	43	#581	78	#600	82	227	127	54	218	152	0
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	414	728	400	833	848	404	1225	635	392	645	631
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.79	0.34	0.76	0.36	0.68	0.20	0.21	0.67	0.21	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3151: N 35th Ave & Johnson Street/Johnson ST

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	475	56	123	581	282	252	231	122	242	125	56
Future Volume (veh/h)	61	475	56	123	581	282	252	231	122	242	125	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	516	61	134	632	307	274	251	133	263	136	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	683	81	312	830	704	406	436	194	395	220	187
Arrive On Green	0.04	0.42	0.42	0.06	0.44	0.44	0.15	0.12	0.12	0.15	0.12	0.12
Sat Flow, veh/h	1781	1641	194	1781	1870	1585	1781	3554	1585	1781	1870	1585
Grp Volume(v), veh/h	66	0	577	134	632	307	274	251	133	263	136	61
Grp Sat Flow(s),veh/h/ln	1781	0	1835	1781	1870	1585	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	2.0	0.0	25.8	4.1	27.3	12.8	12.7	6.4	7.7	12.2	6.7	3.4
Cycle Q Clear(g_c), s	2.0	0.0	25.8	4.1	27.3	12.8	12.7	6.4	7.7	12.2	6.7	3.4
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	0	763	312	830	704	406	436	194	395	220	187
V/C Ratio(X)	0.28	0.00	0.76	0.43	0.76	0.44	0.68	0.58	0.68	0.67	0.62	0.33
Avail Cap(c_a), veh/h	448	0	763	476	830	704	410	1293	577	409	681	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	0.0	23.9	18.2	22.5	18.4	30.5	39.8	40.4	30.6	40.4	38.9
Incr Delay (d2), s/veh	0.7	0.0	6.9	0.9	6.5	2.0	4.3	1.2	4.2	3.9	2.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	12.1	1.7	12.9	4.9	5.8	2.8	3.2	5.6	3.2	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	0.0	30.8	19.1	29.0	20.4	34.8	41.0	44.6	34.5	43.2	39.9
LnGrp LOS	B	A	C	B	C	C	C	D	D	C	D	D
Approach Vol, veh/h	643			1073			658			460		
Approach Delay, s/veh	29.6			25.3			39.2			37.8		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	48.7	20.3	17.8	12.1	46.0	20.8	17.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	15.0	40.0	15.0	35.0	15.0	40.0	15.0	35.0				
Max Q Clear Time (g_c+I1), s	4.0	29.3	14.2	9.7	6.1	27.8	14.7	8.7				
Green Ext Time (p_c), s	0.1	4.1	0.1	2.1	0.2	3.1	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay	31.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	387	34	191	358	84	51	446	182	171	405	93
Future Volume (vph)	106	387	34	191	358	84	51	446	182	171	405	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	300		0	250		250	130		130
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.988			0.972			0.957				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1840	0	1770	1811	0	1770	3387	0	1770	3539	1583
Flt Permitted	0.324			0.280			0.487			0.124		
Satd. Flow (perm)	604	1840	0	522	1811	0	907	3387	0	231	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			10			41				119
Link Speed (mph)		30			30			30				30
Link Distance (ft)		663			713			658				518
Travel Time (s)		15.1			16.2			15.0				11.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	421	37	208	389	91	55	485	198	186	440	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	458	0	208	480	0	55	683	0	186	440	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		8

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0		4.0	6.0		4.0	6.0	6.0
Minimum Split (s)	11.0	37.0		11.0	37.0		11.0	27.0		11.0	27.0	27.0
Total Split (s)	22.0	56.0		22.0	56.0		24.0	36.0		24.0	36.0	36.0
Total Split (%)	15.9%	40.6%		15.9%	40.6%		17.4%	26.1%		17.4%	26.1%	26.1%
Maximum Green (s)	16.0	50.0		16.0	50.0		18.0	30.0		18.0	30.0	30.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		24.0			24.0			14.0			14.0	14.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effect Green (s)	65.2	56.7		72.9	60.5		38.1	31.4		50.9	40.3	40.3
Actuated g/C Ratio	0.47	0.41		0.53	0.44		0.28	0.23		0.37	0.29	0.29
v/c Ratio	0.32	0.60		0.54	0.60		0.19	0.85		0.79	0.43	0.18
Control Delay	19.5	37.7		22.7	34.4		29.0	58.9		54.3	41.1	4.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	19.5	37.7		22.7	34.4		29.0	58.9		54.3	41.1	4.8
LOS	B	D		C	C		C	E		D	D	A
Approach Delay		34.0			30.9			56.7			39.4	
Approach LOS		C			C			E			D	

Intersection Summary

Area Type:	Other
Cycle Length: 138	
Actuated Cycle Length: 138	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 40.8	Intersection LOS: D
Intersection Capacity Utilization 80.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3152: N 46th Ave & Johnson St

 Ø1	 Ø2 (R)	 Ø3	 Ø4
22 s	56 s	24 s	36 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
22 s	56 s	24 s	36 s

Queues

3152: N 46th Ave & Johnson St

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	115	458	208	480	55	683	186	440	101
v/c Ratio	0.32	0.60	0.54	0.60	0.19	0.85	0.79	0.43	0.18
Control Delay	19.5	37.7	22.7	34.4	29.0	58.9	54.3	41.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	37.7	22.7	34.4	29.0	58.9	54.3	41.1	4.8
Queue Length 50th (ft)	51	326	97	326	31	287	114	168	0
Queue Length 95th (ft)	86	472	148	473	60	#404	185	223	32
Internal Link Dist (ft)		583		633		578		438	
Turn Bay Length (ft)	220		300		250		130		130
Base Capacity (vph)	451	766	427	799	433	819	286	1033	546
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.60	0.49	0.60	0.13	0.83	0.65	0.43	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3152: N 46th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	387	34	191	358	84	51	446	182	171	405	93
Future Volume (veh/h)	106	387	34	191	358	84	51	446	182	171	405	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	421	37	208	389	91	55	485	198	186	440	101
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	395	747	66	431	689	161	260	524	213	234	969	432
Arrive On Green	0.05	0.44	0.44	0.08	0.47	0.47	0.03	0.21	0.21	0.09	0.27	0.27
Sat Flow, veh/h	1781	1695	149	1781	1466	343	1781	2466	1001	1781	3554	1585
Grp Volume(v), veh/h	115	0	458	208	0	480	55	349	334	186	440	101
Grp Sat Flow(s),veh/h/ln	1781	0	1844	1781	0	1809	1781	1777	1690	1781	1777	1585
Q Serve(g_s), s	4.9	0.0	25.5	8.8	0.0	26.4	3.3	26.5	26.8	10.9	14.2	6.8
Cycle Q Clear(g_c), s	4.9	0.0	25.5	8.8	0.0	26.4	3.3	26.5	26.8	10.9	14.2	6.8
Prop In Lane	1.00		0.08	1.00		0.19	1.00		0.59	1.00		1.00
Lane Grp Cap(c), veh/h	395	0	813	431	0	850	260	378	359	234	969	432
V/C Ratio(X)	0.29	0.00	0.56	0.48	0.00	0.56	0.21	0.92	0.93	0.80	0.45	0.23
Avail Cap(c_a), veh/h	513	0	813	498	0	850	432	386	367	298	969	432
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	0.0	28.7	21.1	0.0	26.4	40.5	53.2	53.3	39.0	41.7	39.0
Incr Delay (d2), s/veh	0.1	0.0	2.8	0.3	0.0	2.7	0.1	27.1	29.6	8.4	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	11.9	3.7	0.0	12.0	1.5	14.7	14.3	5.3	6.3	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	0.0	31.5	21.4	0.0	29.1	40.7	80.3	82.9	47.4	42.0	39.3
LnGrp LOS	C	A	C	C	A	C	D	F	F	D	D	D
Approach Vol, veh/h	573		688			738			727			
Approach Delay, s/veh	29.5		26.8			78.5			43.0			
Approach LOS	C		C			E			D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	70.8	19.0	35.3	16.9	66.8	10.7	43.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	16.0	50.0	18.0	30.0	16.0	50.0	18.0	30.0				
Max Q Clear Time (g_c+I1), s	6.9	28.4	12.9	28.8	10.8	27.5	5.3	16.2				
Green Ext Time (p_c), s	0.1	3.2	0.1	0.5	0.1	3.0	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay	45.7											
HCM 6th LOS	D											

Lanes, Volumes, Timings
3150: Johnson ST & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	501	103	205	447	147	223	521	214	114	354	335
Future Volume (vph)	231	501	103	205	447	147	223	521	214	114	354	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.235			0.173			0.280			0.292		
Satd. Flow (perm)	438	1863	1583	322	1863	1583	522	3539	1583	544	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			110			160			222			364
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	251	545	112	223	486	160	242	566	233	124	385	364
Shared Lane Traffic (%)												
Lane Group Flow (vph)	251	545	112	223	486	160	242	566	233	124	385	364
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8

Lanes, Volumes, Timings
3150: Johnson ST & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	10.0	10.0
Minimum Split (s)	11.0	42.0	42.0	11.0	42.0	42.0	11.0	30.0	30.0	11.0	30.0	30.0
Total Split (s)	26.0	51.0	51.0	26.0	51.0	51.0	26.0	46.0	46.0	26.0	46.0	46.0
Total Split (%)	17.4%	34.2%	34.2%	17.4%	34.2%	34.2%	17.4%	30.9%	30.9%	17.4%	30.9%	30.9%
Maximum Green (s)	20.0	45.0	45.0	20.0	45.0	45.0	20.0	40.0	40.0	20.0	40.0	40.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		29.0	29.0		29.0	29.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	61.8	45.6	45.6	61.6	45.5	45.5	44.8	27.9	27.9	33.4	22.0	22.0
Actuated g/C Ratio	0.49	0.36	0.36	0.49	0.36	0.36	0.36	0.22	0.22	0.27	0.18	0.18
v/c Ratio	0.65	0.80	0.17	0.65	0.72	0.24	0.67	0.72	0.44	0.48	0.62	0.63
Control Delay	25.6	48.5	6.9	27.8	43.9	5.8	39.2	51.0	8.9	34.5	52.7	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	48.5	6.9	27.8	43.9	5.8	39.2	51.0	8.9	34.5	52.7	9.7
LOS	C	D	A	C	D	A	D	D	A	C	D	A
Approach Delay		37.0			32.8			38.8			32.2	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 149

Actuated Cycle Length: 125.3

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 35.4

Intersection LOS: D

Intersection Capacity Utilization 79.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3150: Johnson ST & N Park Ave

 Ø1	 Ø2	 Ø3	 Ø4
26 s	51 s	26 s	46 s
 Ø5	 Ø6	 Ø7	 Ø8
26 s	51 s	26 s	46 s

Queues

3150: Johnson ST & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	251	545	112	223	486	160	242	566	233	124	385	364
v/c Ratio	0.65	0.80	0.17	0.65	0.72	0.24	0.67	0.72	0.44	0.48	0.62	0.63
Control Delay	25.6	48.5	6.9	27.8	43.9	5.8	39.2	51.0	8.9	34.5	52.7	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	48.5	6.9	27.8	43.9	5.8	39.2	51.0	8.9	34.5	52.7	9.7
Queue Length 50th (ft)	105	403	1	92	344	0	145	226	7	69	157	0
Queue Length 95th (ft)	194	#710	46	183	#589	53	220	307	75	117	215	86
Internal Link Dist (ft)		926			648			487			382	
Turn Bay Length (ft)	250		235	200		340	175		190	180		200
Base Capacity (vph)	441	678	646	400	676	676	389	1141	660	379	1141	757
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.80	0.17	0.56	0.72	0.24	0.62	0.50	0.35	0.33	0.34	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3150: Johnson ST & N Park Ave

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	501	103	205	447	147	223	521	214	114	354	335
Future Volume (veh/h)	231	501	103	205	447	147	223	521	214	114	354	335
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	251	545	112	223	486	160	242	566	233	124	385	364
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	332	655	555	294	636	539	376	1080	482	290	911	406
Arrive On Green	0.11	0.35	0.35	0.10	0.34	0.34	0.11	0.30	0.30	0.07	0.26	0.26
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	251	545	112	223	486	160	242	566	233	124	385	364
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.0	35.4	6.5	10.6	30.7	9.8	12.8	17.5	15.9	6.7	12.0	29.4
Cycle Q Clear(g_c), s	12.0	35.4	6.5	10.6	30.7	9.8	12.8	17.5	15.9	6.7	12.0	29.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	332	655	555	294	636	539	376	1080	482	290	911	406
V/C Ratio(X)	0.76	0.83	0.20	0.76	0.76	0.30	0.64	0.52	0.48	0.43	0.42	0.90
Avail Cap(c_a), veh/h	408	655	555	388	636	539	442	1080	482	440	1073	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	39.5	30.1	30.0	39.0	32.1	30.0	38.2	37.6	33.2	41.1	47.5
Incr Delay (d2), s/veh	6.3	11.8	0.8	6.1	8.5	1.4	2.5	0.5	0.8	1.0	0.3	17.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	18.3	2.7	5.0	15.6	4.0	5.8	7.7	6.3	3.0	5.3	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	51.3	30.9	36.1	47.5	33.5	32.5	38.6	38.4	34.2	41.4	64.8
LnGrp LOS	C	D	C	D	D	C	C	D	D	C	D	E
Approach Vol, veh/h	908			869			1041			873		
Approach Delay, s/veh	44.3			42.0			37.1			50.1		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.4	51.0	14.8	46.2	19.0	52.3	21.1	40.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	20.0	45.0	20.0	40.0	20.0	45.0	20.0	40.0				
Max Q Clear Time (g_c+I1), s	14.0	32.7	8.7	19.5	12.6	37.4	14.8	31.4				
Green Ext Time (p_c), s	0.4	3.0	0.2	4.7	0.4	2.4	0.3	2.6				
Intersection Summary												
HCM 6th Ctrl Delay	43.1											
HCM 6th LOS	D											

Lanes, Volumes, Timings
11: N 35 Ave & Garfield St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	1	89	26	2	12	42	135	1	4	219	10
Future Volume (vph)	95	1	89	26	2	12	42	135	1	4	219	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.935			0.959			0.999			0.994	
Flt Protected		0.975			0.968			0.988			0.999	
Satd. Flow (prot)	0	1698	0	0	1729	0	0	1839	0	0	1850	0
Flt Permitted		0.975			0.968			0.988			0.999	
Satd. Flow (perm)	0	1698	0	0	1729	0	0	1839	0	0	1850	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		448			432			249			584	
Travel Time (s)		10.2			9.8			5.7			13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	1	97	28	2	13	46	147	1	4	238	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	201	0	0	43	0	0	194	0	0	253	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization 43.6% ICU Level of Service A												
Analysis Period (min) 15												

HCM 6th Roundabout
11: N 35 Ave & Garfield St

Intersection				
Intersection Delay, s/veh	4.7			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	201	43	194	253
Demand Flow Rate, veh/h	205	44	198	258
Vehicles Circulating, veh/h	276	302	110	78
Vehicles Exiting, veh/h	60	6	371	268
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.4	4.0	4.3	4.6
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	205	44	198	258
Cap Entry Lane, veh/h	1041	1014	1233	1274
Entry HV Adj Factor	0.980	0.976	0.980	0.982
Flow Entry, veh/h	201	43	194	253
Cap Entry, veh/h	1021	990	1209	1251
V/C Ratio	0.197	0.043	0.161	0.202
Control Delay, s/veh	5.4	4.0	4.3	4.6
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1

Lanes, Volumes, Timings
14: N Park Rd & Garfield St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	0	0	3	2	1022	2	6	1026	5
Future Volume (vph)	5	1	5	0	0	3	2	1022	2	6	1026	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.939			0.865						0.999	
Flt Protected		0.978										
Satd. Flow (prot)	0	1711	0	0	1611	0	0	3539	0	0	3536	0
Flt Permitted		0.978										
Satd. Flow (perm)	0	1711	0	0	1611	0	0	3539	0	0	3536	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		497			365			517			589	
Travel Time (s)		11.3			8.3			11.8			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1	5	0	0	3	2	1111	2	7	1115	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	3	0	0	1115	0	0	1127	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	44.5%						ICU Level of Service A					
Analysis Period (min)	15											

HCM 6th TWSC
14: N Park Rd & Garfield St

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	1	5	0	0	3	2	1022	2	6	1026	5
Future Vol, veh/h	5	1	5	0	0	3	2	1022	2	6	1026	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1	5	0	0	3	2	1111	2	7	1115	5
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1692	2249	560	1688	2250	557	1120	0	0	1113	0	0
Stage 1	1132	1132	-	1116	1116	-	-	-	-	-	-	-
Stage 2	560	1117	-	572	1134	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	60	41	472	61	41	474	619	-	-	623	-	-
Stage 1	216	276	-	221	281	-	-	-	-	-	-	-
Stage 2	480	281	-	472	276	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	58	39	472	57	39	474	619	-	-	623	-	-
Mov Cap-2 Maneuver	58	39	-	57	39	-	-	-	-	-	-	-
Stage 1	214	268	-	219	279	-	-	-	-	-	-	-
Stage 2	473	279	-	451	268	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	51		12.6		0		0.1					
HCM LOS	F		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	619	-	-	90	474	623	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.133	0.007	0.01	-	-				
HCM Control Delay (s)	10.8	0	-	51	12.6	10.8	-	-				
HCM Lane LOS	B	A	-	F	B	B	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0	-	-				

Lanes, Volumes, Timings
3495: Hospital Office Entrance & N 35 Ave

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	315	122	124	327	32
Future Volume (vph)	55	315	122	124	327	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.549			
Satd. Flow (perm)	1770	1583	1023	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		342				35
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	342	133	135	355	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	342	133	135	355	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6

Future NB PM Peak

Synchro 11 Report

Lanes, Volumes, Timings

3495: Hospital Office Entrance & N 35 Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	28.0	28.0	28.0	28.0
Total Split (s)	31.0	31.0	41.0	41.0	41.0	41.0
Total Split (%)	43.1%	43.1%	56.9%	56.9%	56.9%	56.9%
Maximum Green (s)	25.0	25.0	35.0	35.0	35.0	35.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)	10.6	10.6	35.2	35.2	35.2	35.2
Actuated g/C Ratio	0.18	0.18	0.61	0.61	0.61	0.61
v/c Ratio	0.18	0.60	0.21	0.12	0.31	0.04
Control Delay	21.3	7.9	6.5	5.4	6.6	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	7.9	6.5	5.4	6.6	2.2
LOS	C	A	A	A	A	A
Approach Delay	9.9			5.9	6.2	
Approach LOS	A			A	A	

Intersection Summary

Area Type: Other

Cycle Length: 72

Actuated Cycle Length: 57.8

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 7.5

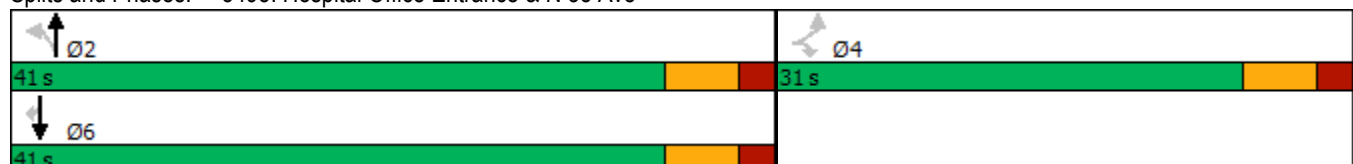
Intersection LOS: A

Intersection Capacity Utilization 53.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3495: Hospital Office Entrance & N 35 Ave



Queues

3495: Hospital Office Entrance & N 35 Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	60	342	133	135	355	35
v/c Ratio	0.18	0.60	0.21	0.12	0.31	0.04
Control Delay	21.3	7.9	6.5	5.4	6.6	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	7.9	6.5	5.4	6.6	2.2
Queue Length 50th (ft)	18	0	17	16	49	0
Queue Length 95th (ft)	44	57	45	39	100	9
Internal Link Dist (ft)	276			307	169	
Turn Bay Length (ft)	140	140	220			120
Base Capacity (vph)	766	879	622	1133	1133	976
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.39	0.21	0.12	0.31	0.04
Intersection Summary						

HCM Signalized Intersection Capacity Analysis

3495: Hospital Office Entrance & N 35 Ave

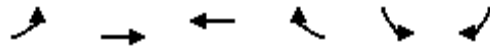


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	315	122	124	327	32
Future Volume (vph)	55	315	122	124	327	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.55	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1022	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	342	133	135	355	35
RTOR Reduction (vph)	0	279	0	0	0	14
Lane Group Flow (vph)	60	63	133	135	355	21
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	10.6	10.6	35.2	35.2	35.2	35.2
Effective Green, g (s)	10.6	10.6	35.2	35.2	35.2	35.2
Actuated g/C Ratio	0.18	0.18	0.61	0.61	0.61	0.61
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	324	290	622	1134	1134	964
v/s Ratio Prot				0.07	0.19	
v/s Ratio Perm	0.03	0.04	0.13			0.01
v/c Ratio	0.19	0.22	0.21	0.12	0.31	0.02
Uniform Delay, d1	19.9	20.1	5.1	4.8	5.5	4.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.4	0.8	0.2	0.7	0.0
Delay (s)	20.2	20.4	5.9	5.0	6.2	4.5
Level of Service	C	C	A	A	A	A
Approach Delay (s)	20.4			5.4	6.0	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			11.3		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.29			
Actuated Cycle Length (s)			57.8		Sum of lost time (s)	12.0
Intersection Capacity Utilization			53.0%		ICU Level of Service	A
Analysis Period (min)			15			

c Critical Lane Group

Lanes, Volumes, Timings

23: Johnson Street & Emergency Entrance



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	66	523	735	59	49	119
Future Volume (vph)	66	523	735	59	49	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			220	52	66
Storage Lanes	0			1	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1863	1583	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		306	685		513	
Travel Time (s)		7.0	15.6		11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	568	799	64	53	129
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	568	799	64	53	129
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	55.7%			ICU Level of Service B		
Analysis Period (min)	15					

HCM 6th TWSC

23: Johnson Street & Emergency Entrance

Intersection

Int Delay, s/veh 3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	66	523	735	59	49	119
Future Vol, veh/h	66	523	735	59	49	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	568	799	64	53	129

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	863	0	0 1511 799
Stage 1	-	-	- 799 -
Stage 2	-	-	- 712 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	779	-	- 132 386
Stage 1	-	-	- 443 -
Stage 2	-	-	- 486 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	779	-	- 120 386
Mov Cap-2 Maneuver	-	-	- 120 -
Stage 1	-	-	- 402 -
Stage 2	-	-	- 486 -

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	30.1
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	779	-	-	-	120	386
HCM Lane V/C Ratio	0.092	-	-	-	0.444	0.335
HCM Control Delay (s)	10.1	-	-	-	57	19
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.9	1.4

Lanes, Volumes, Timings
21: Johnson St & Employee Garage

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	524	5	9	769	10	2	0	62	0	0	461
Future Volume (vph)	8	524	5	9	769	10	2	0	62	0	0	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270		0	0		120	0		0	130		120
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.998			0.869				0.850
Flt Protected	0.950				0.999			0.999				
Satd. Flow (prot)	1770	1861	0	0	3529	0	0	1617	0	1863	0	1583
Flt Permitted	0.950				0.999			0.999				
Satd. Flow (perm)	1770	1861	0	0	3529	0	0	1617	0	1863	0	1583
Link Speed (mph)		30			30			30				30
Link Distance (ft)		665			306			73				508
Travel Time (s)		15.1			7.0			1.7				11.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	570	5	10	836	11	2	0	67	0	0	501
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	575	0	0	857	0	0	69	0	0	0	501
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	64.3%						ICU Level of Service C					
Analysis Period (min)	15											

HCM 6th TWSC
21: Johnson St & Employee Garage

Intersection												
Int Delay, s/veh	10.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	524	5	9	769	10	2	0	62	0	0	461
Future Vol, veh/h	8	524	5	9	769	10	2	0	62	0	0	461
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	270	-	-	-	-	120	-	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	570	5	10	836	11	2	0	67	0	0	501
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	847	0	0	575	0	0	1029	1458	573	1486	-	424
Stage 1	-	-	-	-	-	-	591	591	-	862	-	-
Stage 2	-	-	-	-	-	-	438	867	-	624	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	7.33	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.53	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	6.13	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	-	3.319
Pot Cap-1 Maneuver	788	-	-	996	-	-	200	129	518	94	0	579
Stage 1	-	-	-	-	-	-	492	494	-	317	0	-
Stage 2	-	-	-	-	-	-	568	369	-	472	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	788	-	-	996	-	-	26	125	518	80	-	579
Mov Cap-2 Maneuver	-	-	-	-	-	-	26	125	-	80	-	-
Stage 1	-	-	-	-	-	-	487	489	-	314	-	-
Stage 2	-	-	-	-	-	-	75	362	-	406	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			19			38.7		
HCM LOS							C			E		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	326	788	-	-	996	-	-	-	579			
HCM Lane V/C Ratio	0.213	0.011	-	-	0.01	-	-	-	0.865			
HCM Control Delay (s)	19	9.6	-	-	8.7	-	-	0	38.7			
HCM Lane LOS	C	A	-	-	A	-	-	A	E			
HCM 95th %tile Q(veh)	0.8	0	-	-	0	-	-	-	9.7			

Lanes, Volumes, Timings

3151: N 35th Ave & Johnson Street/Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	434	119	162	502	139	78	69	116	342	190	121
Future Volume (vph)	43	434	119	162	502	139	78	69	116	342	190	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.968				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1803	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.312			0.143			0.628			0.486		
Satd. Flow (perm)	581	1803	0	266	1863	1583	1170	3539	1583	905	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				145			127			132
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	472	129	176	546	151	85	75	126	372	207	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	601	0	176	546	151	85	75	126	372	207	132
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8

Synchro 11 Report

Future NB PM Peak

Lanes, Volumes, Timings

3151: N 35th Ave & Johnson Street/Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	31.0		11.0	31.0	31.0	11.0	31.0	31.0	11.0	33.0	33.0
Total Split (s)	21.0	46.0		21.0	46.0	46.0	21.0	41.0	41.0	21.0	41.0	41.0
Total Split (%)	16.3%	35.7%		16.3%	35.7%	35.7%	16.3%	31.8%	31.8%	16.3%	31.8%	31.8%
Maximum Green (s)	15.0	40.0		15.0	40.0	40.0	15.0	35.0	35.0	15.0	35.0	35.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0			18.0	18.0		18.0	18.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effect Green (s)	47.0	40.3		56.9	47.5	47.5	21.3	11.9	11.9	31.9	20.4	20.4
Actuated g/C Ratio	0.46	0.39		0.55	0.46	0.46	0.21	0.12	0.12	0.31	0.20	0.20
v/c Ratio	0.14	0.84		0.56	0.64	0.19	0.29	0.18	0.43	0.91	0.56	0.32
Control Delay	13.3	42.2		19.4	27.7	4.5	28.0	41.5	11.7	60.0	45.9	8.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.3	42.2		19.4	27.7	4.5	28.0	41.5	11.7	60.0	45.9	8.8
LOS	B	D		B	C	A	C	D	B	E	D	A
Approach Delay		40.1			22.0			24.4			46.4	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type: Other

Cycle Length: 129

Actuated Cycle Length: 102.9

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 33.8

Intersection LOS: C

Intersection Capacity Utilization 83.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3151: N 35th Ave & Johnson Street/Johnson St

 Ø1	 Ø2	 Ø3	 Ø4
21 s	46 s	21 s	41 s
 Ø5	 Ø6	 Ø7	 Ø8
21 s	46 s	21 s	41 s

Queues

3151: N 35th Ave & Johnson Street/Johnson St

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	601	176	546	151	85	75	126	372	207	132
v/c Ratio	0.14	0.84	0.56	0.64	0.19	0.29	0.18	0.43	0.91	0.56	0.32
Control Delay	13.3	42.2	19.4	27.7	4.5	28.0	41.5	11.7	60.0	45.9	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.3	42.2	19.4	27.7	4.5	28.0	41.5	11.7	60.0	45.9	8.8
Queue Length 50th (ft)	13	338	52	271	2	39	23	0	207	127	0
Queue Length 95th (ft)	36	#672	109	482	44	77	46	51	#291	217	51
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	486	712	369	859	808	395	1211	625	407	637	628
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.84	0.48	0.64	0.19	0.22	0.06	0.20	0.91	0.32	0.21

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3151: N 35th Ave & Johnson Street/Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	434	119	162	502	139	78	69	116	342	190	121
Future Volume (veh/h)	43	434	119	162	502	139	78	69	116	342	190	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	472	129	176	546	151	85	75	126	372	207	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	306	584	160	310	863	731	286	378	169	453	382	324
Arrive On Green	0.03	0.41	0.41	0.08	0.46	0.46	0.06	0.11	0.11	0.15	0.20	0.20
Sat Flow, veh/h	1781	1414	387	1781	1870	1585	1781	3554	1585	1781	1870	1585
Grp Volume(v), veh/h	47	0	601	176	546	151	85	75	126	372	207	132
Grp Sat Flow(s),veh/h/ln	1781	0	1801	1781	1870	1585	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	1.5	0.0	28.5	5.3	21.5	5.5	4.1	1.9	7.5	15.0	9.6	7.0
Cycle Q Clear(g_c), s	1.5	0.0	28.5	5.3	21.5	5.5	4.1	1.9	7.5	15.0	9.6	7.0
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	306	0	744	310	863	731	286	378	169	453	382	324
V/C Ratio(X)	0.15	0.00	0.81	0.57	0.63	0.21	0.30	0.20	0.75	0.82	0.54	0.41
Avail Cap(c_a), veh/h	529	0	744	448	863	731	460	1284	573	453	676	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	0.0	25.0	19.1	19.9	15.5	35.6	39.5	42.0	32.6	34.5	33.5
Incr Delay (d2), s/veh	0.2	0.0	9.2	1.6	3.5	0.6	0.6	0.3	6.4	11.5	1.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	13.5	2.2	9.8	2.1	1.8	0.8	3.2	2.4	4.4	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	0.0	34.2	20.8	23.4	16.2	36.1	39.8	48.4	44.0	35.7	34.3
LnGrp LOS	B	A	C	C	C	B	D	D	D	D	D	C
Approach Vol, veh/h		648			873			286			711	
Approach Delay, s/veh		33.0			21.6			42.5			39.8	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	50.7	21.0	16.3	13.5	46.0	11.5	25.8				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	15.0	40.0	15.0	35.0	15.0	40.0	15.0	35.0				
Max Q Clear Time (g_c+I1), s	3.5	23.5	17.0	9.5	7.3	30.5	6.1	11.6				
Green Ext Time (p_c), s	0.1	3.8	0.0	0.8	0.3	2.8	0.1	1.6				
Intersection Summary												
HCM 6th Ctrl Delay			32.0									
HCM 6th LOS			C									

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	338	48	169	535	109	51	432	58	71	421	65
Future Volume (vph)	50	338	48	169	535	109	51	432	58	71	421	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	300		0	250		250	130		130
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.981			0.975			0.982				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1827	0	1770	1816	0	1770	3476	0	1770	3539	1583
Flt Permitted	0.222			0.368			0.340			0.205		
Satd. Flow (perm)	414	1827	0	685	1816	0	633	3476	0	382	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			8			10				119
Link Speed (mph)		30			30			30				30
Link Distance (ft)		672			724			828				464
Travel Time (s)		15.3			16.5			18.8				10.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	367	52	184	582	118	55	470	63	77	458	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	419	0	184	700	0	55	533	0	77	458	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		8

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0		4.0	6.0		4.0	6.0	6.0
Minimum Split (s)	11.0	37.0		11.0	37.0		11.0	27.0		11.0	27.0	27.0
Total Split (s)	22.0	56.0		22.0	56.0		24.0	36.0		24.0	36.0	36.0
Total Split (%)	15.9%	40.6%		15.9%	40.6%		17.4%	26.1%		17.4%	26.1%	26.1%
Maximum Green (s)	16.0	50.0		16.0	50.0		18.0	30.0		18.0	30.0	30.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		24.0			24.0			14.0			14.0	14.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effect Green (s)	74.3	68.5		84.1	75.3		33.7	26.7		37.3	30.1	30.1
Actuated g/C Ratio	0.54	0.50		0.61	0.55		0.24	0.19		0.27	0.22	0.22
v/c Ratio	0.19	0.46		0.37	0.70		0.26	0.78		0.41	0.59	0.16
Control Delay	14.5	26.5		14.8	30.3		36.1	60.2		40.5	51.8	1.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	14.5	26.5		14.8	30.3		36.1	60.2		40.5	51.8	1.6
LOS	B	C		B	C		D	E		D	D	A
Approach Delay		25.2			27.1			58.0			44.5	
Approach LOS		C			C			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 38.0

Intersection LOS: D

Intersection Capacity Utilization 75.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3152: N 46th Ave & Johnson St

 Ø1	 Ø2 (R)	 Ø3	 Ø4
22 s	56 s	24 s	36 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
22 s	56 s	24 s	36 s

Queues

3152: N 46th Ave & Johnson St



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	419	184	700	55	533	77	458	71
v/c Ratio	0.19	0.46	0.37	0.70	0.26	0.78	0.41	0.59	0.16
Control Delay	14.5	26.5	14.8	30.3	36.1	60.2	40.5	51.8	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	26.5	14.8	30.3	36.1	60.2	40.5	51.8	1.6
Queue Length 50th (ft)	18	235	67	459	36	237	51	200	0
Queue Length 95th (ft)	43	399	123	#753	63	286	84	243	6
Internal Link Dist (ft)		592		644		748		384	
Turn Bay Length (ft)	220		300		250		130		130
Base Capacity (vph)	407	910	547	994	336	779	294	804	451
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.46	0.34	0.70	0.16	0.68	0.26	0.57	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3152: N 46th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	338	48	169	535	109	51	432	58	71	421	65
Future Volume (veh/h)	50	338	48	169	535	109	51	432	58	71	421	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	367	52	184	582	118	55	470	63	77	458	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	329	868	123	552	870	176	175	550	73	166	672	300
Arrive On Green	0.03	0.54	0.54	0.06	0.58	0.58	0.04	0.17	0.17	0.05	0.19	0.19
Sat Flow, veh/h	1781	1602	227	1781	1509	306	1781	3151	420	1781	3554	1585
Grp Volume(v), veh/h	54	0	419	184	0	700	55	264	269	77	458	71
Grp Sat Flow(s),veh/h/ln	1781	0	1829	1781	0	1815	1781	1777	1795	1781	1777	1585
Q Serve(g_s), s	1.9	0.0	18.8	6.2	0.0	36.7	3.5	19.9	20.1	4.8	16.6	5.2
Cycle Q Clear(g_c), s	1.9	0.0	18.8	6.2	0.0	36.7	3.5	19.9	20.1	4.8	16.6	5.2
Prop In Lane	1.00		0.12	1.00		0.17	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	329	0	991	552	0	1047	175	310	313	166	672	300
V/C Ratio(X)	0.16	0.00	0.42	0.33	0.00	0.67	0.31	0.85	0.86	0.46	0.68	0.24
Avail Cap(c_a), veh/h	491	0	991	651	0	1047	345	386	390	310	773	345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	0.0	18.8	13.6	0.0	20.1	45.3	55.2	55.3	45.0	52.1	47.5
Incr Delay (d2), s/veh	0.1	0.0	1.3	0.1	0.0	3.4	0.4	13.9	14.6	0.7	2.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	8.3	2.5	0.0	16.2	1.6	10.1	10.4	2.2	7.6	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.4	0.0	20.1	13.7	0.0	23.5	45.7	69.2	69.9	45.8	54.1	47.9
LnGrp LOS	B	A	C	B	A	C	D	E	E	D	D	D
Approach Vol, veh/h	473			884			588			606		
Approach Delay, s/veh	19.8			21.5			67.3			52.3		
Approach LOS	B			C			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	85.6	12.9	30.1	14.3	80.7	10.8	32.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	16.0	50.0	18.0	30.0	16.0	50.0	18.0	30.0				
Max Q Clear Time (g_c+I1), s	3.9	38.7	6.8	22.1	8.2	20.8	5.5	18.6				
Green Ext Time (p_c), s	0.0	3.8	0.0	2.0	0.1	2.8	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay	39.1											
HCM 6th LOS	D											

Lanes, Volumes, Timings
3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	285	478	154	220	436	183	120	558	258	136	650	251
Future Volume (vph)	285	478	154	220	436	183	120	558	258	136	650	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.196			0.183			0.159			0.219		
Satd. Flow (perm)	365	1863	1583	341	1863	1583	296	3539	1583	408	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			199			249			218
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	310	520	167	239	474	199	130	607	280	148	707	273
Shared Lane Traffic (%)												
Lane Group Flow (vph)	310	520	167	239	474	199	130	607	280	148	707	273
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8

Synchro 11 Report

Future NB PM Peak

Lanes, Volumes, Timings
3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	42.0	42.0	11.0	42.0	42.0	11.0	30.0	30.0	11.0	30.0	30.0
Total Split (s)	26.0	51.0	51.0	26.0	51.0	51.0	26.0	46.0	46.0	26.0	46.0	46.0
Total Split (%)	17.4%	34.2%	34.2%	17.4%	34.2%	34.2%	17.4%	30.9%	30.9%	17.4%	30.9%	30.9%
Maximum Green (s)	20.0	45.0	45.0	20.0	45.0	45.0	20.0	40.0	40.0	20.0	40.0	40.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		29.0	29.0		29.0	29.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	66.9	47.4	47.4	62.7	45.2	45.2	46.0	33.7	33.7	47.3	34.3	34.3
Actuated g/C Ratio	0.49	0.35	0.35	0.46	0.33	0.33	0.34	0.25	0.25	0.35	0.25	0.25
v/c Ratio	0.81	0.80	0.27	0.70	0.76	0.30	0.56	0.69	0.48	0.54	0.79	0.48
Control Delay	40.6	52.5	13.4	32.8	51.3	5.9	36.6	50.9	10.1	35.1	54.4	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.6	52.5	13.4	32.8	51.3	5.9	36.6	50.9	10.1	35.1	54.4	12.8
LOS	D	D	B	C	D	A	D	D	B	D	D	B
Approach Delay		42.2			36.5			37.8			41.8	
Approach LOS		D			D			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 149

Actuated Cycle Length: 135.6

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 39.7

Intersection LOS: D

Intersection Capacity Utilization 83.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3150: Johnson St & N Park Ave

			
Ø1	Ø2	Ø3	Ø4
26 s	51 s	26 s	46 s
			
Ø5	Ø6	Ø7	Ø8
26 s	51 s	26 s	46 s

Queues

3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	310	520	167	239	474	199	130	607	280	148	707	273
v/c Ratio	0.81	0.80	0.27	0.70	0.76	0.30	0.56	0.69	0.48	0.54	0.79	0.48
Control Delay	40.6	52.5	13.4	32.8	51.3	5.9	36.6	50.9	10.1	35.1	54.4	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.6	52.5	13.4	32.8	51.3	5.9	36.6	50.9	10.1	35.1	54.4	12.8
Queue Length 50th (ft)	156	430	31	115	379	0	75	257	21	86	308	38
Queue Length 95th (ft)	#347	#691	95	206	#596	59	121	336	101	136	394	122
Internal Link Dist (ft)		926			648			487			382	
Turn Bay Length (ft)	250		235	200		340	175		190	180		200
Base Capacity (vph)	388	650	628	375	620	660	331	1048	644	358	1055	624
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.80	0.27	0.64	0.76	0.30	0.39	0.58	0.43	0.41	0.67	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

3150: Johnson St & N Park Ave

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	478	154	220	436	183	120	558	258	136	650	251
Future Volume (veh/h)	285	478	154	220	436	183	120	558	258	136	650	251
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	310	520	167	239	474	199	130	607	280	148	707	273
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	396	725	614	355	678	575	219	843	376	250	872	389
Arrive On Green	0.13	0.39	0.39	0.10	0.36	0.36	0.07	0.24	0.24	0.08	0.25	0.25
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	310	520	167	239	474	199	130	607	280	148	707	273
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	13.3	29.3	8.9	10.3	26.8	11.3	6.8	19.5	20.3	7.7	23.3	19.5
Cycle Q Clear(g_c), s	13.3	29.3	8.9	10.3	26.8	11.3	6.8	19.5	20.3	7.7	23.3	19.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	396	725	614	355	678	575	219	843	376	250	872	389
V/C Ratio(X)	0.78	0.72	0.27	0.67	0.70	0.35	0.59	0.72	0.74	0.59	0.81	0.70
Avail Cap(c_a), veh/h	457	725	614	460	678	575	378	1146	511	395	1146	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	32.2	26.0	24.5	33.7	28.8	34.6	43.5	43.8	33.6	44.1	42.7
Incr Delay (d2), s/veh	7.5	6.0	1.1	2.5	5.9	1.6	2.6	1.4	3.9	2.2	3.4	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	14.3	3.6	4.5	13.2	4.6	3.1	8.7	8.4	3.5	10.6	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	38.3	27.1	27.1	39.6	30.5	37.1	45.0	47.8	35.8	47.5	45.6
LnGrp LOS	C	D	C	C	D	C	D	D	D	D	D	D
Approach Vol, veh/h	997			912			1017			1128		
Approach Delay, s/veh	34.4			34.3			44.7			45.5		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.8	51.0	15.9	35.4	18.7	54.1	14.9	36.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	20.0	45.0	20.0	40.0	20.0	45.0	20.0	40.0				
Max Q Clear Time (g_c+I1), s	15.3	28.8	9.7	22.3	12.3	31.3	8.8	25.3				
Green Ext Time (p_c), s	0.4	3.4	0.3	4.9	0.4	3.4	0.2	5.2				
Intersection Summary												
HCM 6th Ctrl Delay	40.1											
HCM 6th LOS	D											

Lanes, Volumes, Timings
11: N 35th Ave & Garfield St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	0	19	11	0	1	65	112	3	10	276	29
Future Volume (vph)	17	0	19	11	0	1	65	112	3	10	276	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.927			0.990			0.998			0.987	
Flt Protected		0.977			0.956			0.982			0.998	
Satd. Flow (prot)	0	1687	0	0	1763	0	0	1826	0	0	1835	0
Flt Permitted		0.977			0.956			0.982			0.998	
Satd. Flow (perm)	0	1687	0	0	1763	0	0	1826	0	0	1835	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		448			432			249			584	
Travel Time (s)		10.2			9.8			5.7			13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	0	21	12	0	1	71	122	3	11	300	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	13	0	0	196	0	0	343	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization 39.8%												
ICU Level of Service A												
Analysis Period (min) 15												

HCM 6th Roundabout
11: N 35th Ave & Garfield St

Intersection				
Intersection Delay, s/veh	4.8			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	39	13	196	343
Demand Flow Rate, veh/h	39	13	199	350
Vehicles Circulating, veh/h	329	214	29	84
Vehicles Exiting, veh/h	105	14	339	143
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.0	3.3	4.0	5.4
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	39	13	199	350
Cap Entry Lane, veh/h	987	1109	1340	1267
Entry HV Adj Factor	1.000	1.000	0.983	0.980
Flow Entry, veh/h	39	13	196	343
Cap Entry, veh/h	987	1109	1317	1241
V/C Ratio	0.040	0.012	0.149	0.276
Control Delay, s/veh	4.0	3.3	4.0	5.4
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

Lanes, Volumes, Timings
14: N Park Rd & Garfield St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	0	1	2	1	8	3	906	3	2	815	2
Future Volume (vph)	3	0	1	2	1	8	3	906	3	2	815	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.966			0.899							
Flt Protected		0.964			0.992							
Satd. Flow (prot)	0	1735	0	0	1661	0	0	3539	0	0	3539	0
Flt Permitted		0.964			0.992							
Satd. Flow (perm)	0	1735	0	0	1661	0	0	3539	0	0	3539	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		497			365			517			589	
Travel Time (s)		11.3			8.3			11.8			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	0	1	2	1	9	3	985	3	2	886	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	12	0	0	991	0	0	890	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 37.2% ICU Level of Service A												
Analysis Period (min) 15												

HCM 2010 TWSC
14: N Park Rd & Garfield St

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↕			↕↕	
Traffic Vol, veh/h	3	0	1	2	1	8	3	906	3	2	815	2
Future Vol, veh/h	3	0	1	2	1	8	3	906	3	2	815	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	1	2	1	9	3	985	3	2	886	2
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1390	1885	444	1440	1885	494	888	0	0	988	0	0
Stage 1	891	891	-	993	993	-	-	-	-	-	-	-
Stage 2	499	994	-	447	892	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	102	70	561	93	70	521	758	-	-	695	-	-
Stage 1	304	359	-	263	322	-	-	-	-	-	-	-
Stage 2	522	321	-	560	358	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	98	69	561	92	69	521	758	-	-	695	-	-
Mov Cap-2 Maneuver	98	69	-	92	69	-	-	-	-	-	-	-
Stage 1	301	357	-	261	319	-	-	-	-	-	-	-
Stage 2	507	318	-	556	356	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	35.3		22.9		0		0					
HCM LOS	E		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	758	-	-	123	213	695	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.035	0.056	0.003	-	-				
HCM Control Delay (s)	9.8	0	-	35.3	22.9	10.2	-	-				
HCM Lane LOS	A	A	-	E	C	B	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-				

Lanes, Volumes, Timings

3495: Hospital Office Entrance & N 35th Ave

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	163	398	180	277	52
Future Volume (vph)	28	163	398	180	277	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.553			
Satd. Flow (perm)	1770	1583	1030	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		177				57
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	177	433	196	301	57
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	177	433	196	301	57
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Minimum Split (s)	31.0	31.0	28.0	28.0	28.0	28.0
Total Split (s)	31.0	31.0	41.0	41.0	41.0	41.0
Total Split (%)	43.1%	43.1%	56.9%	56.9%	56.9%	56.9%
Maximum Green (s)	25.0	25.0	35.0	35.0	35.0	35.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)	25.0	25.0	35.0	35.0	35.0	35.0
Actuated g/C Ratio	0.35	0.35	0.49	0.49	0.49	0.49
v/c Ratio	0.05	0.27	0.87	0.22	0.33	0.07

Lanes, Volumes, Timings

3495: Hospital Office Entrance & N 35th Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	16.0	4.2	37.2	11.4	12.6	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	4.2	37.2	11.4	12.6	3.4
LOS	B	A	D	B	B	A
Approach Delay	5.9			29.2	11.2	
Approach LOS	A			C	B	

Intersection Summary

Area Type: Other

Cycle Length: 72

Actuated Cycle Length: 72

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 19.7

Intersection LOS: B

Intersection Capacity Utilization 60.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3495: Hospital Office Entrance & N 35th Ave



Queues

3495: Hospital Office Entrance & N 35th Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	30	177	433	196	301	57
v/c Ratio	0.05	0.27	0.87	0.22	0.33	0.07
Control Delay	16.0	4.2	37.2	11.4	12.6	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	4.2	37.2	11.4	12.6	3.4
Queue Length 50th (ft)	9	0	161	47	77	0
Queue Length 95th (ft)	25	38	#338	84	129	17
Internal Link Dist (ft)	276			307	169	
Turn Bay Length (ft)	140	140	220			120
Base Capacity (vph)	614	665	500	905	905	798
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.27	0.87	0.22	0.33	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3495: Hospital Office Entrance & N 35th Ave



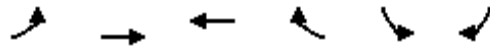
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	163	398	180	277	52
Future Volume (vph)	28	163	398	180	277	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.55	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1030	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	177	433	196	301	57
RTOR Reduction (vph)	0	116	0	0	0	29
Lane Group Flow (vph)	30	61	433	196	301	28
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	25.0	25.0	35.0	35.0	35.0	35.0
Effective Green, g (s)	25.0	25.0	35.0	35.0	35.0	35.0
Actuated g/C Ratio	0.35	0.35	0.49	0.49	0.49	0.49
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Grp Cap (vph)	614	549	500	905	905	769
v/s Ratio Prot				0.11	0.16	
v/s Ratio Perm	0.02	0.04	0.42			0.02
v/c Ratio	0.05	0.11	0.87	0.22	0.33	0.04
Uniform Delay, d1	15.6	16.0	16.4	10.6	11.3	9.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.4	17.9	0.5	1.0	0.1
Delay (s)	15.8	16.4	34.4	11.2	12.3	9.8
Level of Service	B	B	C	B	B	A
Approach Delay (s)	16.3			27.1	11.9	
Approach LOS	B			C	B	

Intersection Summary

HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings

23: Johnson St & Hospital Emergency Entrance



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	137	567	809	150	26	44
Future Volume (vph)	137	567	809	150	26	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			220	52	66
Storage Lanes	0			1	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1863	1583	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		306	685		513	
Travel Time (s)		7.0	15.6		11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	149	616	879	163	28	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	149	616	879	163	28	48
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	63.5%			ICU Level of Service B		
Analysis Period (min)	15					

HCM 6th TWSC
23: Johnson St & Hospital Emergency Entrance

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	137	567	809	150	26	44
Future Vol, veh/h	137	567	809	150	26	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	616	879	163	28	48
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1042	0	-	0	1793	879
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	914	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	667	-	-	-	89	347
Stage 1	-	-	-	-	406	-
Stage 2	-	-	-	-	391	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	667	-	-	-	69	347
Mov Cap-2 Maneuver	-	-	-	-	69	-
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	391	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.3	0		43.9		
HCM LOS	E					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	667	-	-	-	69	347
HCM Lane V/C Ratio	0.223	-	-	-	0.41	0.138
HCM Control Delay (s)	11.9	-	-	-	89.4	17
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.9	-	-	-	1.6	0.5

Lanes, Volumes, Timings

21: Johnson St & Employee Parking Garage

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	655	27	10	578	230	0	0	3	0	0	340
Future Volume (vph)	340	655	27	10	578	230	0	0	3	0	0	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270		0	0		120	0		0	130		120
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.958			0.865				0.850
Flt Protected	0.950				0.999							
Satd. Flow (prot)	1770	1852	0	0	3387	0	0	1611	0	1863	0	1583
Flt Permitted	0.950				0.999							
Satd. Flow (perm)	1770	1852	0	0	3387	0	0	1611	0	1863	0	1583
Link Speed (mph)		30			30			30				30
Link Distance (ft)		665			306			73				508
Travel Time (s)		15.1			7.0			1.7				11.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	712	29	11	628	250	0	0	3	0	0	370
Shared Lane Traffic (%)												
Lane Group Flow (vph)	370	741	0	0	889	0	0	3	0	0	0	370
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	73.1%						ICU Level of Service D					
Analysis Period (min)	15											

HCM 6th TWSC
21: Johnson St & Employee Parking Garage

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	340	655	27	10	578	230	0	0	3	0	0	340
Future Vol, veh/h	340	655	27	10	578	230	0	0	3	0	0	340
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	270	-	-	-	-	120	-	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	370	712	29	11	628	250	0	0	3	0	0	370
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	878	0	0	741	0	0	1803	2367	727	2243	-	439
Stage 1	-	-	-	-	-	-	1467	1467	-	775	-	-
Stage 2	-	-	-	-	-	-	336	900	-	1468	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	7.33	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.53	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	6.13	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	-	3.319
Pot Cap-1 Maneuver	767	-	-	864	-	-	55	35	423	26	0	567
Stage 1	-	-	-	-	-	-	158	191	-	358	0	-
Stage 2	-	-	-	-	-	-	652	356	-	158	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	767	-	-	864	-	-	12	18	423	16	-	567
Mov Cap-2 Maneuver	-	-	-	-	-	-	12	18	-	16	-	-
Stage 1	-	-	-	-	-	-	82	99	-	185	-	-
Stage 2	-	-	-	-	-	-	221	347	-	81	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.7			0.1			13.6			22.4		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	423	767	-	-	864	-	-	-	567			
HCM Lane V/C Ratio	0.008	0.482	-	-	0.013	-	-	-	0.652			
HCM Control Delay (s)	13.6	14	-	-	9.2	-	-	0	22.4			
HCM Lane LOS	B	B	-	-	A	-	-	A	C			
HCM 95th %tile Q(veh)	0	2.6	-	-	0	-	-	-	4.7			

Lanes, Volumes, Timings
3151: N 35th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	475	59	123	597	298	262	241	122	258	126	56
Future Volume (vph)	61	475	59	123	597	298	262	241	122	258	126	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.984				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1833	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.097			0.088			0.644			0.567		
Satd. Flow (perm)	181	1833	0	164	1863	1583	1200	3539	1583	1056	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				262			131			127
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	66	511	63	132	642	320	282	259	131	277	135	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	574	0	132	642	320	282	259	131	277	135	60
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8

Lanes, Volumes, Timings
3151: N 35th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	2.0	12.0		2.0	12.0	12.0	2.0	6.0	6.0	2.0	6.0	6.0
Minimum Split (s)	11.0	31.0		11.0	31.0	31.0	11.0	31.0	31.0	11.0	33.0	33.0
Total Split (s)	21.0	46.0		21.0	46.0	46.0	21.0	41.0	41.0	21.0	41.0	41.0
Total Split (%)	16.3%	35.7%		16.3%	35.7%	35.7%	16.3%	31.8%	31.8%	16.3%	31.8%	31.8%
Maximum Green (s)	15.0	40.0		15.0	40.0	40.0	15.0	35.0	35.0	15.0	35.0	35.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	Max	Max	None	Max	Max
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0			18.0	18.0		18.0	18.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effect Green (s)	48.1	40.0		55.3	45.7	45.7	49.5	35.1	35.1	49.5	35.0	35.0
Actuated g/C Ratio	0.39	0.32		0.44	0.37	0.37	0.40	0.28	0.28	0.40	0.28	0.28
v/c Ratio	0.38	0.97		0.61	0.94	0.43	0.52	0.26	0.24	0.55	0.26	0.11
Control Delay	26.3	72.7		35.4	62.6	8.5	28.0	36.2	7.1	28.7	37.2	0.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	72.7		35.4	62.6	8.5	28.0	36.2	7.1	28.7	37.2	0.4
LOS	C	E		D	E	A	C	D	A	C	D	A
Approach Delay		67.9			43.5			27.1			27.6	
Approach LOS		E			D			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 129

Actuated Cycle Length: 124.8

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 42.5

Intersection LOS: D

Intersection Capacity Utilization 76.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3151: N 35th Ave & Johnson St

			
Ø1	Ø2	Ø3	Ø4
21 s	46 s	21 s	41 s
			
Ø5	Ø6	Ø7	Ø8
21 s	46 s	21 s	41 s

Queues

3151: N 35th Ave & Johnson St

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	66	574	132	642	320	282	259	131	277	135	60
v/c Ratio	0.38	0.97	0.61	0.94	0.43	0.52	0.26	0.24	0.55	0.26	0.11
Control Delay	26.3	72.7	35.4	62.6	8.5	28.0	36.2	7.1	28.7	37.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	72.7	35.4	62.6	8.5	28.0	36.2	7.1	28.7	37.2	0.4
Queue Length 50th (ft)	30	456	61	~519	32	147	85	0	144	85	0
Queue Length 95th (ft)	57	#727	120	#788	109	229	128	49	225	146	0
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	270	591	268	682	745	550	994	538	509	523	535
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.97	0.49	0.94	0.43	0.51	0.26	0.24	0.54	0.26	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3151: N 35th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	475	59	123	597	298	262	241	122	258	126	56
Future Volume (veh/h)	61	475	59	123	597	298	262	241	122	258	126	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	511	63	132	642	320	282	259	131	277	135	60
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	535	66	194	667	565	553	1020	455	507	537	455
Arrive On Green	0.04	0.33	0.33	0.07	0.36	0.36	0.12	0.29	0.29	0.12	0.29	0.29
Sat Flow, veh/h	1781	1633	201	1781	1870	1585	1781	3554	1585	1781	1870	1585
Grp Volume(v), veh/h	66	0	574	132	642	320	282	259	131	277	135	60
Grp Sat Flow(s),veh/h/ln	1781	0	1834	1781	1870	1585	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	3.0	0.0	37.4	5.9	41.0	19.9	13.5	6.8	7.8	13.3	6.8	3.4
Cycle Q Clear(g_c), s	3.0	0.0	37.4	5.9	41.0	19.9	13.5	6.8	7.8	13.3	6.8	3.4
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	137	0	601	194	667	565	553	1020	455	507	537	455
V/C Ratio(X)	0.48	0.00	0.95	0.68	0.96	0.57	0.51	0.25	0.29	0.55	0.25	0.13
Avail Cap(c_a), veh/h	290	0	601	296	667	565	553	1020	455	507	537	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	0.0	40.1	30.6	38.5	31.7	25.5	33.5	33.8	25.4	33.4	32.2
Incr Delay (d2), s/veh	2.6	0.0	27.1	4.1	26.9	4.1	0.8	0.6	1.6	1.2	1.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	21.1	2.7	23.5	8.2	5.8	3.1	3.2	5.8	3.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	0.0	67.2	34.8	65.4	35.7	26.3	34.1	35.4	26.6	34.6	32.8
LnGrp LOS	C	A	E	C	E	D	C	C	D	C	C	C
Approach Vol, veh/h		640			1094			672			472	
Approach Delay, s/veh		63.8			53.0			31.1			29.7	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	49.5	21.0	41.0	14.0	46.0	21.0	41.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	15.0	40.0	15.0	35.0	15.0	40.0	15.0	35.0				
Max Q Clear Time (g_c+I1), s	5.0	43.0	15.3	9.8	7.9	39.4	15.5	8.8				
Green Ext Time (p_c), s	0.1	0.0	0.0	2.1	0.2	0.3	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			46.5									
HCM 6th LOS			D									

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	403	34	201	366	94	51	446	203	191	405	93
Future Volume (vph)	106	403	34	201	366	94	51	446	203	191	405	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	300		0	250		250	130		130
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.988			0.969			0.953				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1840	0	1770	1805	0	1770	3373	0	1770	3539	1583
Flt Permitted	0.293			0.245			0.497			0.118		
Satd. Flow (perm)	546	1840	0	456	1805	0	926	3373	0	220	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			10			49				119
Link Speed (mph)		30			30			30				30
Link Distance (ft)		855			1024			971				495
Travel Time (s)		19.4			23.3			22.1				11.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	438	37	218	398	102	55	485	221	208	440	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	475	0	218	500	0	55	706	0	208	440	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		8

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0		4.0	6.0		4.0	6.0	6.0
Minimum Split (s)	11.0	37.0		11.0	37.0		11.0	27.0		11.0	27.0	27.0
Total Split (s)	22.0	56.0		22.0	56.0		24.0	36.0		24.0	36.0	36.0
Total Split (%)	15.9%	40.6%		15.9%	40.6%		17.4%	26.1%		17.4%	26.1%	26.1%
Maximum Green (s)	16.0	50.0		16.0	50.0		18.0	30.0		18.0	30.0	30.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		24.0			24.0			14.0			14.0	14.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effect Green (s)	62.9	54.2		71.4	58.5		38.8	32.1		52.8	42.2	42.2
Actuated g/C Ratio	0.46	0.39		0.52	0.42		0.28	0.23		0.38	0.31	0.31
v/c Ratio	0.35	0.66		0.61	0.65		0.18	0.86		0.84	0.41	0.18
Control Delay	20.9	40.9		25.9	37.2		28.2	58.4		59.3	39.6	4.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	20.9	40.9		25.9	37.2		28.2	58.4		59.3	39.6	4.7
LOS	C	D		C	D		C	E		E	D	A
Approach Delay		37.0			33.7			56.2			40.3	
Approach LOS		D			C			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 42.3

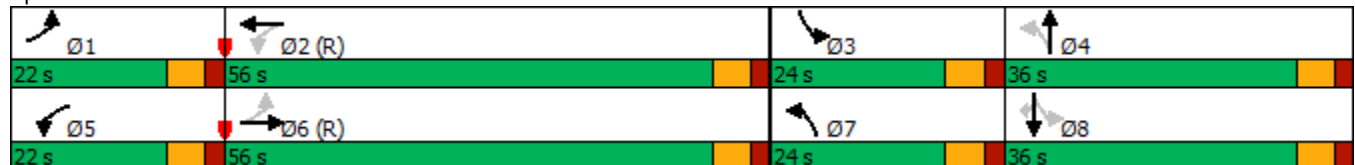
Intersection LOS: D

Intersection Capacity Utilization 83.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3152: N 46th Ave & Johnson St



Queues

3152: N 46th Ave & Johnson St

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	115	475	218	500	55	706	208	440	101
v/c Ratio	0.35	0.66	0.61	0.65	0.18	0.86	0.84	0.41	0.18
Control Delay	20.9	40.9	25.9	37.2	28.2	58.4	59.3	39.6	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.9	40.9	25.9	37.2	28.2	58.4	59.3	39.6	4.7
Queue Length 50th (ft)	53	359	107	359	30	293	125	163	0
Queue Length 95th (ft)	86	495	156	500	60	#422	#228	223	32
Internal Link Dist (ft)		775		944		891		415	
Turn Bay Length (ft)	220		300		250		130		130
Base Capacity (vph)	418	737	392	771	444	833	286	1083	567
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.64	0.56	0.65	0.12	0.85	0.73	0.41	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3152: N 46th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	403	34	201	366	94	51	446	203	191	405	93
Future Volume (veh/h)	106	403	34	201	366	94	51	446	203	191	405	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	438	37	218	398	102	55	485	221	208	440	101
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	364	719	61	405	654	168	273	516	234	247	1017	454
Arrive On Green	0.05	0.42	0.42	0.08	0.46	0.46	0.03	0.22	0.22	0.10	0.29	0.29
Sat Flow, veh/h	1781	1701	144	1781	1436	368	1781	2377	1077	1781	3554	1585
Grp Volume(v), veh/h	115	0	475	218	0	500	55	362	344	208	440	101
Grp Sat Flow(s),veh/h/ln	1781	0	1844	1781	0	1804	1781	1777	1677	1781	1777	1585
Q Serve(g_s), s	5.0	0.0	27.6	9.4	0.0	28.8	3.3	27.6	27.9	12.1	13.9	6.7
Cycle Q Clear(g_c), s	5.0	0.0	27.6	9.4	0.0	28.8	3.3	27.6	27.9	12.1	13.9	6.7
Prop In Lane	1.00		0.08	1.00		0.20	1.00		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	364	0	780	405	0	822	273	386	364	247	1017	454
V/C Ratio(X)	0.32	0.00	0.61	0.54	0.00	0.61	0.20	0.94	0.95	0.84	0.43	0.22
Avail Cap(c_a), veh/h	480	0	780	463	0	822	445	386	364	296	1017	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	0.0	31.0	22.7	0.0	28.3	40.0	53.1	53.2	38.2	40.1	37.6
Incr Delay (d2), s/veh	0.2	0.0	3.5	0.4	0.0	3.3	0.1	30.5	33.3	14.8	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	13.1	4.0	0.0	13.2	1.5	15.6	15.1	6.3	6.2	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	0.0	34.5	23.1	0.0	31.6	40.2	83.6	86.5	53.0	40.4	37.8
LnGrp LOS	C	A	C	C	A	C	D	F	F	D	D	D
Approach Vol, veh/h		590			718			761			749	
Approach Delay, s/veh		32.3			29.0			81.8			43.6	
Approach LOS		C			C			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	68.9	20.2	36.0	17.5	64.3	10.7	45.5				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	16.0	50.0	18.0	30.0	16.0	50.0	18.0	30.0				
Max Q Clear Time (g_c+I1), s	7.0	30.8	14.1	29.9	11.4	29.6	5.3	15.9				
Green Ext Time (p_c), s	0.1	3.2	0.1	0.0	0.1	3.0	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay			47.8									
HCM 6th LOS			D									

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

05/02/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	403	34	201	366	94	51	446	203	191	405	93
Future Volume (vph)	106	403	34	201	366	94	51	446	203	191	405	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	300		0	250		250	130		130
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.988			0.969			0.953				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1840	0	1770	1805	0	1770	3373	0	1770	3539	1583
Flt Permitted	0.247			0.145			0.497			0.146		
Satd. Flow (perm)	460	1840	0	270	1805	0	926	3373	0	272	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			11			50				166
Link Speed (mph)		30			30			30				30
Link Distance (ft)		855			1024			971				495
Travel Time (s)		19.4			23.3			22.1				11.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	438	37	218	398	102	55	485	221	208	440	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	475	0	218	500	0	55	706	0	208	440	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		8

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

05/02/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0		4.0	6.0		4.0	6.0	6.0
Minimum Split (s)	11.0	37.0		11.0	37.0		11.0	27.0		11.0	27.0	27.0
Total Split (s)	14.0	53.0		22.0	61.0		11.0	38.0		25.0	52.0	52.0
Total Split (%)	10.1%	38.4%		15.9%	44.2%		8.0%	27.5%		18.1%	37.7%	37.7%
Maximum Green (s)	8.0	47.0		16.0	55.0		5.0	32.0		19.0	46.0	46.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		24.0			24.0			14.0			14.0	14.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effect Green (s)	42.1	34.7		52.9	40.5		33.0	28.0		47.4	39.3	39.3
Actuated g/C Ratio	0.37	0.30		0.46	0.35		0.29	0.25		0.42	0.34	0.34
v/c Ratio	0.45	0.85		0.73	0.77		0.18	0.82		0.73	0.36	0.15
Control Delay	24.7	53.0		35.6	41.5		25.5	48.1		39.8	31.3	0.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	24.7	53.0		35.6	41.5		25.5	48.1		39.8	31.3	0.6
LOS	C	D		D	D		C	D		D	C	A
Approach Delay		47.5			39.7			46.4			29.5	
Approach LOS		D			D			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 138

Actuated Cycle Length: 114.2

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 40.4

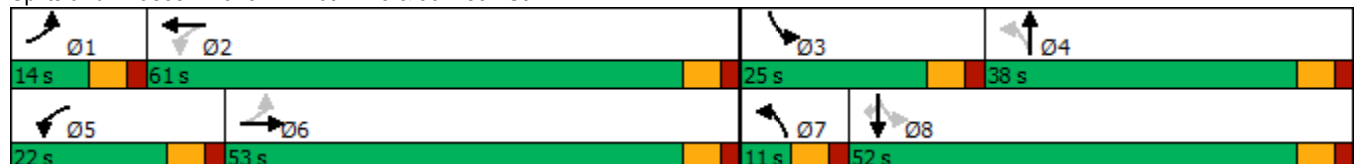
Intersection LOS: D

Intersection Capacity Utilization 83.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3152: N 46th Ave & Johnson St



Queues

3152: N 46th Ave & Johnson St

05/02/2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	115	475	218	500	55	706	208	440	101
v/c Ratio	0.45	0.85	0.73	0.77	0.18	0.82	0.73	0.36	0.15
Control Delay	24.7	53.0	35.6	41.5	25.5	48.1	39.8	31.3	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	53.0	35.6	41.5	25.5	48.1	39.8	31.3	0.6
Queue Length 50th (ft)	49	340	98	332	25	247	102	135	0
Queue Length 95th (ft)	91	513	180	494	58	#397	193	206	1
Internal Link Dist (ft)		775		944		891		415	
Turn Bay Length (ft)	220		300		250		130		130
Base Capacity (vph)	269	791	347	912	308	1021	373	1487	761
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.60	0.63	0.55	0.18	0.69	0.56	0.30	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

3152: N 46th Ave & Johnson St

05/02/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	403	34	201	366	94	51	446	203	191	405	93
Future Volume (veh/h)	106	403	34	201	366	94	51	446	203	191	405	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	438	37	218	398	102	55	485	221	208	440	101
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	503	43	308	486	125	327	593	269	301	1137	507
Arrive On Green	0.06	0.30	0.30	0.10	0.34	0.34	0.03	0.25	0.25	0.10	0.32	0.32
Sat Flow, veh/h	1781	1701	144	1781	1436	368	1781	2377	1077	1781	3554	1585
Grp Volume(v), veh/h	115	0	475	218	0	500	55	362	344	208	440	101
Grp Sat Flow(s),veh/h/ln	1781	0	1844	1781	0	1804	1781	1777	1677	1781	1777	1585
Q Serve(g_s), s	4.3	0.0	23.8	8.1	0.0	24.8	2.2	18.7	18.9	8.1	9.4	4.5
Cycle Q Clear(g_c), s	4.3	0.0	23.8	8.1	0.0	24.8	2.2	18.7	18.9	8.1	9.4	4.5
Prop In Lane	1.00		0.08	1.00		0.20	1.00		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	261	0	546	308	0	611	327	443	418	301	1137	507
V/C Ratio(X)	0.44	0.00	0.87	0.71	0.00	0.82	0.17	0.82	0.82	0.69	0.39	0.20
Avail Cap(c_a), veh/h	296	0	888	413	0	1017	359	583	550	462	1675	747
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	32.6	23.6	0.0	29.5	25.9	34.5	34.6	24.7	25.8	24.1
Incr Delay (d2), s/veh	0.4	0.0	5.5	1.8	0.0	2.8	0.1	6.8	7.6	1.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	11.2	3.5	0.0	10.9	0.9	8.8	8.4	3.4	3.9	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	0.0	38.1	25.5	0.0	32.3	26.0	41.3	42.2	25.7	26.0	24.3
LnGrp LOS	C	A	D	C	A	C	C	D	D	C	C	C
Approach Vol, veh/h		590			718			761			749	
Approach Delay, s/veh		35.4			30.2			40.6			25.7	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.1	39.0	16.2	30.3	16.2	34.9	9.3	37.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	8.0	55.0	19.0	32.0	16.0	47.0	5.0	46.0				
Max Q Clear Time (g_c+I1), s	6.3	26.8	10.1	20.9	10.1	25.8	4.2	11.4				
Green Ext Time (p_c), s	0.0	3.6	0.1	3.4	0.1	3.0	0.0	3.6				
Intersection Summary												
HCM 6th Ctrl Delay			32.9									
HCM 6th LOS			C									

Lanes, Volumes, Timings
3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	238	514	106	205	472	147	230	521	214	114	354	335
Future Volume (vph)	238	514	106	205	472	147	230	521	214	114	354	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.191			0.168			0.277			0.294		
Satd. Flow (perm)	356	1863	1583	313	1863	1583	516	3539	1583	548	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			110			158			222			364
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	259	559	115	223	513	160	250	566	233	124	385	364
Shared Lane Traffic (%)												
Lane Group Flow (vph)	259	559	115	223	513	160	250	566	233	124	385	364
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8

Lanes, Volumes, Timings
3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	5.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	42.0	42.0	11.0	42.0	42.0	11.0	30.0	30.0	11.0	30.0	30.0
Total Split (s)	26.0	51.0	51.0	26.0	51.0	51.0	26.0	46.0	46.0	26.0	46.0	46.0
Total Split (%)	17.4%	34.2%	34.2%	17.4%	34.2%	34.2%	17.4%	30.9%	30.9%	17.4%	30.9%	30.9%
Maximum Green (s)	20.0	45.0	45.0	20.0	45.0	45.0	20.0	40.0	40.0	20.0	40.0	40.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		29.0	29.0		29.0	29.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	64.7	46.9	46.9	61.6	45.4	45.4	45.4	28.3	28.3	33.7	22.2	22.2
Actuated g/C Ratio	0.51	0.37	0.37	0.48	0.36	0.36	0.36	0.22	0.22	0.26	0.17	0.17
v/c Ratio	0.69	0.81	0.18	0.66	0.77	0.24	0.70	0.72	0.44	0.48	0.62	0.63
Control Delay	29.0	49.1	7.3	29.1	47.5	6.1	41.0	51.6	8.9	35.0	53.6	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	49.1	7.3	29.1	47.5	6.1	41.0	51.6	8.9	35.0	53.6	9.7
LOS	C	D	A	C	D	A	D	D	A	C	D	A
Approach Delay		38.4			35.5			39.6			32.6	
Approach LOS		D			D			D			C	

Intersection Summary

Area Type:	Other
Cycle Length:	149
Actuated Cycle Length:	127.2
Natural Cycle:	95
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	36.7
Intersection Capacity Utilization	80.9%
Analysis Period (min)	15
Intersection LOS:	D
ICU Level of Service	D

Splits and Phases: 3150: Johnson St & N Park Ave

 Ø1	 Ø2	 Ø3	 Ø4
26 s	51 s	26 s	46 s
 Ø5	 Ø6	 Ø7	 Ø8
26 s	51 s	26 s	46 s

Queues

3150: Johnson St & N Park Ave

														
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Group Flow (vph)	259	559	115	223	513	160	250	566	233	124	385	364		
v/c Ratio	0.69	0.81	0.18	0.66	0.77	0.24	0.70	0.72	0.44	0.48	0.62	0.63		
Control Delay	29.0	49.1	7.3	29.1	47.5	6.1	41.0	51.6	8.9	35.0	53.6	9.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	29.0	49.1	7.3	29.1	47.5	6.1	41.0	51.6	8.9	35.0	53.6	9.7		
Queue Length 50th (ft)	111	422	3	93	385	1	156	233	7	71	161	0		
Queue Length 95th (ft)	216	#741	49	186	#645	54	228	307	75	117	215	86		
Internal Link Dist (ft)	926				648				487		382			
Turn Bay Length (ft)	250			235	200			340	175			190	180	200
Base Capacity (vph)	409	687	653	391	664	666	383	1122	653	375	1122	750		
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0		
Reduced v/c Ratio	0.63	0.81	0.18	0.57	0.77	0.24	0.65	0.50	0.36	0.33	0.34	0.49		

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3150: Johnson St & N Park Ave

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	238	514	106	205	472	147	230	521	214	114	354	335
Future Volume (veh/h)	238	514	106	205	472	147	230	521	214	114	354	335
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	259	559	115	223	513	160	250	566	233	124	385	364
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	653	554	284	629	533	380	1089	486	291	909	405
Arrive On Green	0.11	0.35	0.35	0.10	0.34	0.34	0.12	0.31	0.31	0.07	0.26	0.26
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	259	559	115	223	513	160	250	566	233	124	385	364
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.6	37.1	6.8	10.8	33.6	10.0	13.4	17.6	16.0	6.8	12.1	29.7
Cycle Q Clear(g_c), s	12.6	37.1	6.8	10.8	33.6	10.0	13.4	17.6	16.0	6.8	12.1	29.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	318	653	554	284	629	533	380	1089	486	291	909	405
V/C Ratio(X)	0.81	0.86	0.21	0.78	0.82	0.30	0.66	0.52	0.48	0.43	0.42	0.90
Avail Cap(c_a), veh/h	385	653	554	375	629	533	438	1089	486	439	1062	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	40.4	30.6	30.8	40.6	32.8	30.3	38.3	37.8	33.6	41.6	48.1
Incr Delay (d2), s/veh	10.7	13.5	0.9	7.8	11.2	1.4	2.9	0.4	0.7	1.0	0.3	17.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	19.5	2.8	5.2	17.4	4.1	6.1	7.8	6.4	3.0	5.4	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	53.9	31.4	38.6	51.8	34.2	33.2	38.7	38.5	34.6	41.9	66.0
LnGrp LOS	D	D	C	D	D	C	C	D	D	C	D	E
Approach Vol, veh/h	933			896			1049			873		
Approach Delay, s/veh	47.5			45.4			37.4			50.9		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.9	51.0	14.9	47.0	19.2	52.8	21.7	40.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	20.0	45.0	20.0	40.0	20.0	45.0	20.0	40.0				
Max Q Clear Time (g_c+I1), s	14.6	35.6	8.8	19.6	12.8	39.1	15.4	31.7				
Green Ext Time (p_c), s	0.4	2.7	0.2	4.7	0.4	2.0	0.3	2.5				
Intersection Summary												
HCM 6th Ctrl Delay	45.0											
HCM 6th LOS	D											

Lanes, Volumes, Timings
11: N 35th Ave & Garfield St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	1	89	26	2	12	42	141	1	4	222	10
Future Volume (vph)	95	1	89	26	2	12	42	141	1	4	222	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.935			0.959			0.999			0.994	
Flt Protected		0.975			0.968			0.989			0.999	
Satd. Flow (prot)	0	1698	0	0	1729	0	0	1840	0	0	1850	0
Flt Permitted		0.975			0.968			0.989			0.999	
Satd. Flow (perm)	0	1698	0	0	1729	0	0	1840	0	0	1850	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		448			432			249			584	
Travel Time (s)		10.2			9.8			5.7			13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	1	97	28	2	13	46	153	1	4	241	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	201	0	0	43	0	0	200	0	0	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization 44.1%												
ICU Level of Service A												
Analysis Period (min) 15												

HCM 6th Roundabout
11: N 35th Ave & Garfield St

Intersection				
Intersection Delay, s/veh	4.8			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	201	43	200	256
Demand Flow Rate, veh/h	205	44	204	261
Vehicles Circulating, veh/h	279	308	110	78
Vehicles Exiting, veh/h	60	6	374	274
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.4	4.0	4.4	4.6
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	205	44	204	261
Cap Entry Lane, veh/h	1038	1008	1233	1274
Entry HV Adj Factor	0.980	0.976	0.980	0.982
Flow Entry, veh/h	201	43	200	256
Cap Entry, veh/h	1018	984	1209	1251
V/C Ratio	0.197	0.044	0.165	0.205
Control Delay, s/veh	5.4	4.0	4.4	4.6
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1

Lanes, Volumes, Timings
14: NPark Rd & Garfield St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	5	0	0	3	2	1022	2	6	1026	5
Future Volume (vph)	5	1	5	0	0	3	2	1022	2	6	1026	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.939			0.865						0.999	
Flt Protected		0.978										
Satd. Flow (prot)	0	1711	0	0	1611	0	0	3539	0	0	3536	0
Flt Permitted		0.978										
Satd. Flow (perm)	0	1711	0	0	1611	0	0	3539	0	0	3536	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		497			365			517			589	
Travel Time (s)		11.3			8.3			11.8			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1	5	0	0	3	2	1111	2	7	1115	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	3	0	0	1115	0	0	1127	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 44.5%												
ICU Level of Service A												
Analysis Period (min) 15												

HCM 6th TWSC
14: NPark Rd & Garfield St

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↑			↕↑	
Traffic Vol, veh/h	5	1	5	0	0	3	2	1022	2	6	1026	5
Future Vol, veh/h	5	1	5	0	0	3	2	1022	2	6	1026	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1	5	0	0	3	2	1111	2	7	1115	5
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1692	2249	560	1688	2250	557	1120	0	0	1113	0	0
Stage 1	1132	1132	-	1116	1116	-	-	-	-	-	-	-
Stage 2	560	1117	-	572	1134	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	60	41	472	61	41	474	619	-	-	623	-	-
Stage 1	216	276	-	221	281	-	-	-	-	-	-	-
Stage 2	480	281	-	472	276	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	58	39	472	57	39	474	619	-	-	623	-	-
Mov Cap-2 Maneuver	58	39	-	57	39	-	-	-	-	-	-	-
Stage 1	214	268	-	219	279	-	-	-	-	-	-	-
Stage 2	473	279	-	451	268	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	51		12.6		0		0.1					
HCM LOS	F		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	619	-	-	90	474	623	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.133	0.007	0.01	-	-				
HCM Control Delay (s)	10.8	0	-	51	12.6	10.8	-	-				
HCM Lane LOS	B	A	-	F	B	B	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0	-	-				

Lanes, Volumes, Timings

3495: Hospital Office Entrance & N 35th Ave

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	350	136	124	327	35
Future Volume (vph)	60	350	136	124	327	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.549			
Satd. Flow (perm)	1770	1583	1023	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		380				38
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	380	148	135	355	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	65	380	148	135	355	38
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6

Lanes, Volumes, Timings

3495: Hospital Office Entrance & N 35th Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	28.0	28.0	28.0	28.0
Total Split (s)	31.0	31.0	41.0	41.0	41.0	41.0
Total Split (%)	43.1%	43.1%	56.9%	56.9%	56.9%	56.9%
Maximum Green (s)	25.0	25.0	35.0	35.0	35.0	35.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effect Green (s)	10.8	10.8	35.0	35.0	35.0	35.0
Actuated g/C Ratio	0.19	0.19	0.61	0.61	0.61	0.61
v/c Ratio	0.20	0.63	0.24	0.12	0.31	0.04
Control Delay	21.3	8.0	6.8	5.5	6.7	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	8.0	6.8	5.5	6.7	2.3
LOS	C	A	A	A	A	A
Approach Delay	9.9			6.2	6.3	
Approach LOS	A			A	A	

Intersection Summary

Area Type: Other

Cycle Length: 72

Actuated Cycle Length: 57.8

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 7.7

Intersection LOS: A

Intersection Capacity Utilization 53.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3495: Hospital Office Entrance & N 35th Ave



Queues

3495: Hospital Office Entrance & N 35th Ave



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	65	380	148	135	355	38
v/c Ratio	0.20	0.63	0.24	0.12	0.31	0.04
Control Delay	21.3	8.0	6.8	5.5	6.7	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	8.0	6.8	5.5	6.7	2.3
Queue Length 50th (ft)	19	0	19	16	49	0
Queue Length 95th (ft)	47	59	52	41	104	10
Internal Link Dist (ft)	276			307	169	
Turn Bay Length (ft)	140	140	220			120
Base Capacity (vph)	766	900	620	1128	1128	974
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.42	0.24	0.12	0.31	0.04
Intersection Summary						

HCM Signalized Intersection Capacity Analysis

3495: Hospital Office Entrance & N 35th Ave

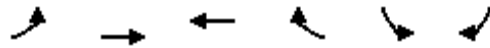


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	350	136	124	327	35
Future Volume (vph)	60	350	136	124	327	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.55	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1022	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	380	148	135	355	38
RTOR Reduction (vph)	0	309	0	0	0	15
Lane Group Flow (vph)	65	71	148	135	355	23
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	10.8	10.8	35.0	35.0	35.0	35.0
Effective Green, g (s)	10.8	10.8	35.0	35.0	35.0	35.0
Actuated g/C Ratio	0.19	0.19	0.61	0.61	0.61	0.61
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	330	295	618	1128	1128	958
v/s Ratio Prot				0.07	0.19	
v/s Ratio Perm	0.04	0.04	0.14			0.01
v/c Ratio	0.20	0.24	0.24	0.12	0.31	0.02
Uniform Delay, d1	19.8	20.0	5.3	4.8	5.6	4.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.4	0.9	0.2	0.7	0.0
Delay (s)	20.1	20.4	6.2	5.1	6.3	4.6
Level of Service	C	C	A	A	A	A
Approach Delay (s)	20.4			5.6	6.1	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			11.7		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.30			
Actuated Cycle Length (s)			57.8		Sum of lost time (s)	12.0
Intersection Capacity Utilization			53.0%		ICU Level of Service	A
Analysis Period (min)			15			

c Critical Lane Group

Lanes, Volumes, Timings

23: Johnson St & Hospital Emergency Entrance



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	66	523	744	65	67	119
Future Volume (vph)	66	523	744	65	67	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			220	52	66
Storage Lanes	0			1	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1863	1583	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		306	685		513	
Travel Time (s)		7.0	15.6		11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	568	809	71	73	129
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	568	809	71	73	129
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.5%			ICU Level of Service B		
Analysis Period (min)	15					

HCM 2010 TWSC

23: Johnson St & Hospital Emergency Entrance

Intersection						
Int Delay, s/veh	5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	66	523	744	65	67	119
Future Vol, veh/h	66	523	744	65	67	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	568	809	71	73	129
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	880	0	-	0	1521	809
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	712	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	768	-	-	-	130	380
Stage 1	-	-	-	-	438	-
Stage 2	-	-	-	-	486	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	768	-	-	-	118	380
Mov Cap-2 Maneuver	-	-	-	-	118	-
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	486	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.1	0		39.5		
HCM LOS	E					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	768	-	-	-	118	380
HCM Lane V/C Ratio	0.093	-	-	-	0.617	0.34
HCM Control Delay (s)	10.2	-	-	-	75.4	19.3
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	-	-	3.1	1.5

Lanes, Volumes, Timings

21: Johnson St & Employee Parking Garage

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	524	5	9	769	10	2	0	62	0	0	520
Future Volume (vph)	40	524	5	9	769	10	2	0	62	0	0	520
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270		0	0		120	0		0	130		120
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.998			0.869				0.850
Flt Protected	0.950				0.999			0.999				
Satd. Flow (prot)	1770	1861	0	0	3529	0	0	1617	0	1863	0	1583
Flt Permitted	0.950				0.999			0.999				
Satd. Flow (perm)	1770	1861	0	0	3529	0	0	1617	0	1863	0	1583
Link Speed (mph)		30			30			30				30
Link Distance (ft)		665			306			73				508
Travel Time (s)		15.1			7.0			1.7				11.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	570	5	10	836	11	2	0	67	0	0	565
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	575	0	0	857	0	0	69	0	0	0	565
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	68.0%						ICU Level of Service C					
Analysis Period (min)	15											

HCM 6th TWSC
21: Johnson St & Employee Parking Garage

Intersection												
Int Delay, s/veh	19											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	524	5	9	769	10	2	0	62	0	0	520
Future Vol, veh/h	40	524	5	9	769	10	2	0	62	0	0	520
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	270	-	-	-	-	120	-	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	570	5	10	836	11	2	0	67	0	0	565
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	847	0	0	575	0	0	1097	1526	573	1554	-	424
Stage 1	-	-	-	-	-	-	659	659	-	862	-	-
Stage 2	-	-	-	-	-	-	438	867	-	692	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	7.33	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.53	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	6.13	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	-	3.319
Pot Cap-1 Maneuver	788	-	-	996	-	-	179	117	518	84	0	579
Stage 1	-	-	-	-	-	-	452	460	-	317	0	-
Stage 2	-	-	-	-	-	-	568	369	-	433	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	788	-	-	996	-	-	4	108	518	69	-	579
Mov Cap-2 Maneuver	-	-	-	-	-	-	4	108	-	69	-	-
Stage 1	-	-	-	-	-	-	427	435	-	300	-	-
Stage 2	-	-	-	-	-	-	13	362	-	356	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.1			93.2			58.4		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	103	788	-	-	996	-	-	-	579			
HCM Lane V/C Ratio	0.675	0.055	-	-	0.01	-	-	-	0.976			
HCM Control Delay (s)	93.2	9.8	-	-	8.7	-	-	0	58.4			
HCM Lane LOS	F	A	-	-	A	-	-	A	F			
HCM 95th %tile Q(veh)	3.4	0.2	-	-	0	-	-	-	13.7			

Lanes, Volumes, Timings
3151: N 35th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	434	137	162	511	148	84	74	116	374	192	121
Future Volume (vph)	43	434	137	162	511	148	84	74	116	374	192	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.964				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1796	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.301			0.124			0.627			0.488		
Satd. Flow (perm)	561	1796	0	231	1863	1583	1168	3539	1583	909	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				153			127			132
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	472	149	176	555	161	91	80	126	407	209	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	621	0	176	555	161	91	80	126	407	209	132
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8

Lanes, Volumes, Timings
3151: N 35th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	31.0		11.0	31.0	31.0	11.0	31.0	31.0	11.0	33.0	33.0
Total Split (s)	21.0	46.0		21.0	46.0	46.0	21.0	41.0	41.0	21.0	41.0	41.0
Total Split (%)	16.3%	35.7%		16.3%	35.7%	35.7%	16.3%	31.8%	31.8%	16.3%	31.8%	31.8%
Maximum Green (s)	15.0	40.0		15.0	40.0	40.0	15.0	35.0	35.0	15.0	35.0	35.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0			18.0	18.0		18.0	18.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effect Green (s)	47.1	40.3		56.9	47.5	47.5	22.0	12.4	12.4	32.2	20.6	20.6
Actuated g/C Ratio	0.46	0.39		0.55	0.46	0.46	0.21	0.12	0.12	0.31	0.20	0.20
v/c Ratio	0.14	0.88		0.59	0.65	0.20	0.30	0.19	0.42	1.00	0.56	0.31
Control Delay	13.6	45.7		22.4	28.4	4.6	28.0	41.4	11.5	78.0	46.1	8.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	45.7		22.4	28.4	4.6	28.0	41.4	11.5	78.0	46.1	8.8
LOS	B	D		C	C	A	C	D	B	E	D	A
Approach Delay		43.4			22.9			24.6			56.9	
Approach LOS		D			C			C			E	

Intersection Summary

Area Type: Other

Cycle Length: 129

Actuated Cycle Length: 103.4

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 38.1

Intersection LOS: D

Intersection Capacity Utilization 85.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3151: N 35th Ave & Johnson St

 Ø1	 Ø2	 Ø3	 Ø4
21 s	46 s	21 s	41 s
 Ø5	 Ø6	 Ø7	 Ø8
21 s	46 s	21 s	41 s

Queues

3151: N 35th Ave & Johnson St

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	621	176	555	161	91	80	126	407	209	132
v/c Ratio	0.14	0.88	0.59	0.65	0.20	0.30	0.19	0.42	1.00	0.56	0.31
Control Delay	13.6	45.7	22.4	28.4	4.6	28.0	41.4	11.5	78.0	46.1	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	45.7	22.4	28.4	4.6	28.0	41.4	11.5	78.0	46.1	8.8
Queue Length 50th (ft)	13	358	52	281	3	42	25	0	232	129	0
Queue Length 95th (ft)	37	#713	124	500	46	82	48	50	#353	221	51
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	476	707	353	856	810	398	1206	623	408	634	626
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.88	0.50	0.65	0.20	0.23	0.07	0.20	1.00	0.33	0.21

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3151: N 35th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	434	137	162	511	148	84	74	116	374	192	121
Future Volume (veh/h)	43	434	137	162	511	148	84	74	116	374	192	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	472	149	176	555	161	91	80	126	407	209	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	563	178	295	862	731	287	379	169	451	375	318
Arrive On Green	0.03	0.41	0.41	0.08	0.46	0.46	0.06	0.11	0.11	0.15	0.20	0.20
Sat Flow, veh/h	1781	1363	430	1781	1870	1585	1781	3554	1585	1781	1870	1585
Grp Volume(v), veh/h	47	0	621	176	555	161	91	80	126	407	209	132
Grp Sat Flow(s),veh/h/ln	1781	0	1793	1781	1870	1585	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	1.5	0.0	30.1	5.3	22.0	5.9	4.3	2.0	7.5	15.0	9.7	7.0
Cycle Q Clear(g_c), s	1.5	0.0	30.1	5.3	22.0	5.9	4.3	2.0	7.5	15.0	9.7	7.0
Prop In Lane	1.00		0.24	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	299	0	740	295	862	731	287	379	169	451	375	318
V/C Ratio(X)	0.16	0.00	0.84	0.60	0.64	0.22	0.32	0.21	0.74	0.90	0.56	0.41
Avail Cap(c_a), veh/h	522	0	740	432	862	731	454	1284	573	451	676	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	0.0	25.5	19.8	20.0	15.7	35.4	39.5	42.0	34.0	34.8	33.8
Incr Delay (d2), s/veh	0.2	0.0	11.0	1.9	3.7	0.7	0.6	0.3	6.4	21.0	1.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	14.5	2.2	10.1	2.2	1.9	0.9	3.2	4.8	4.5	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.4	0.0	36.5	21.8	23.7	16.4	36.0	39.8	48.3	54.9	36.1	34.6
LnGrp LOS	B	A	D	C	C	B	D	D	D	D	D	C
Approach Vol, veh/h		668			892			297			748	
Approach Delay, s/veh		35.2			22.0			42.3			46.1	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	50.7	21.0	16.3	13.5	46.0	11.9	25.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	15.0	40.0	15.0	35.0	15.0	40.0	15.0	35.0				
Max Q Clear Time (g_c+I1), s	3.5	24.0	17.0	9.5	7.3	32.1	6.3	11.7				
Green Ext Time (p_c), s	0.1	3.9	0.0	0.9	0.3	2.6	0.1	1.6				
Intersection Summary												
HCM 6th Ctrl Delay			34.6									
HCM 6th LOS			C									

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	347	48	190	551	130	51	432	69	82	421	65
Future Volume (vph)	50	347	48	190	551	130	51	432	69	82	421	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	300		0	250		250	130		130
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.982			0.971			0.979				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1829	0	1770	1809	0	1770	3465	0	1770	3539	1583
Flt Permitted	0.185			0.349			0.356			0.196		
Satd. Flow (perm)	345	1829	0	650	1809	0	663	3465	0	365	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			10			12				119
Link Speed (mph)		30			30			30				30
Link Distance (ft)		665			725			700				455
Travel Time (s)		15.1			16.5			15.9				10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	377	52	207	599	141	55	470	75	89	458	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	429	0	207	740	0	55	545	0	89	458	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		8

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0		4.0	6.0		4.0	6.0	6.0
Minimum Split (s)	11.0	37.0		11.0	37.0		11.0	27.0		11.0	27.0	27.0
Total Split (s)	22.0	56.0		22.0	56.0		24.0	36.0		24.0	36.0	36.0
Total Split (%)	15.9%	40.6%		15.9%	40.6%		17.4%	26.1%		17.4%	26.1%	26.1%
Maximum Green (s)	16.0	50.0		16.0	50.0		18.0	30.0		18.0	30.0	30.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		24.0			24.0			14.0			14.0	14.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effect Green (s)	72.2	66.4		83.5	74.1		34.1	27.2		39.0	31.2	31.2
Actuated g/C Ratio	0.52	0.48		0.61	0.54		0.25	0.20		0.28	0.23	0.23
v/c Ratio	0.23	0.49		0.43	0.76		0.25	0.79		0.46	0.57	0.16
Control Delay	15.9	28.6		16.1	33.3		35.0	59.9		41.0	50.4	1.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	15.9	28.6		16.1	33.3		35.0	59.9		41.0	50.4	1.5
LOS	B	C		B	C		D	E		D	D	A
Approach Delay		27.2			29.5			57.6			43.4	
Approach LOS		C			C			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 38.7

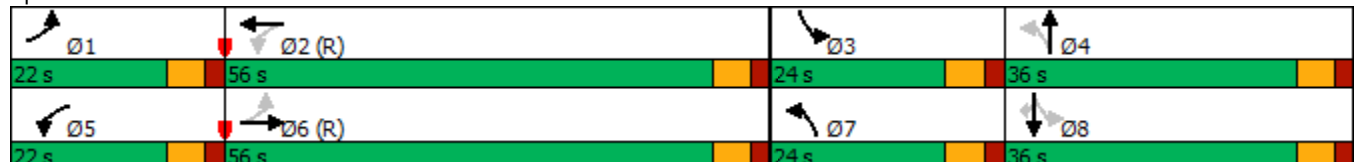
Intersection LOS: D

Intersection Capacity Utilization 78.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3152: N 46th Ave & Johnson St



Queues

3152: N 46th Ave & Johnson St



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	429	207	740	55	545	89	458	71
v/c Ratio	0.23	0.49	0.43	0.76	0.25	0.79	0.46	0.57	0.16
Control Delay	15.9	28.6	16.1	33.3	35.0	59.9	41.0	50.4	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	28.6	16.1	33.3	35.0	59.9	41.0	50.4	1.5
Queue Length 50th (ft)	19	251	79	514	35	242	58	197	0
Queue Length 95th (ft)	44	427	142	#875	62	291	92	239	6
Internal Link Dist (ft)		585		645		620		375	
Turn Bay Length (ft)	220		300		250		130		130
Base Capacity (vph)	369	883	526	976	346	781	294	822	459
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.49	0.39	0.76	0.16	0.70	0.30	0.56	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3152: N 46th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	347	48	190	551	130	51	432	69	82	421	65
Future Volume (veh/h)	50	347	48	190	551	130	51	432	69	82	421	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	377	52	207	599	141	55	470	75	89	458	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	849	117	539	833	196	182	547	87	172	698	312
Arrive On Green	0.03	0.53	0.53	0.07	0.57	0.57	0.03	0.18	0.18	0.05	0.20	0.20
Sat Flow, veh/h	1781	1609	222	1781	1464	345	1781	3072	488	1781	3554	1585
Grp Volume(v), veh/h	54	0	429	207	0	740	55	271	274	89	458	71
Grp Sat Flow(s),veh/h/ln	1781	0	1830	1781	0	1808	1781	1777	1783	1781	1777	1585
Q Serve(g_s), s	1.9	0.0	19.9	7.1	0.0	41.2	3.5	20.4	20.6	5.6	16.4	5.2
Cycle Q Clear(g_c), s	1.9	0.0	19.9	7.1	0.0	41.2	3.5	20.4	20.6	5.6	16.4	5.2
Prop In Lane	1.00		0.12	1.00		0.19	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	292	0	966	539	0	1030	182	316	317	172	698	312
V/C Ratio(X)	0.18	0.00	0.44	0.38	0.00	0.72	0.30	0.86	0.86	0.52	0.66	0.23
Avail Cap(c_a), veh/h	454	0	966	626	0	1030	352	386	388	309	773	345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.1	0.0	20.1	14.2	0.0	21.7	44.8	55.0	55.1	44.6	51.1	46.6
Incr Delay (d2), s/veh	0.1	0.0	1.5	0.2	0.0	4.3	0.3	14.7	15.5	0.9	1.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	8.9	2.9	0.0	18.3	1.6	10.4	10.6	2.5	7.5	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	0.0	21.6	14.4	0.0	26.0	45.2	69.7	70.6	45.5	52.9	47.0
LnGrp LOS	B	A	C	B	A	C	D	E	E	D	D	D
Approach Vol, veh/h	483			947			600			618		
Approach Delay, s/veh	21.3			23.4			67.9			51.2		
Approach LOS	C			C			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	84.6	13.4	30.6	15.2	78.8	10.8	33.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	16.0	50.0	18.0	30.0	16.0	50.0	18.0	30.0				
Max Q Clear Time (g_c+I1), s	3.9	43.2	7.6	22.6	9.1	21.9	5.5	18.4				
Green Ext Time (p_c), s	0.0	2.9	0.0	2.0	0.1	2.9	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay	39.6											
HCM 6th LOS	D											

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	347	48	190	551	130	51	432	69	82	421	65
Future Volume (vph)	50	347	48	190	551	130	51	432	69	82	421	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	300		0	250		250	130		130
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.982			0.971			0.979				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1829	0	1770	1809	0	1770	3465	0	1770	3539	1583
Flt Permitted	0.171			0.314			0.369			0.233		
Satd. Flow (perm)	319	1829	0	585	1809	0	687	3465	0	434	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			13			12				166
Link Speed (mph)		30			30			30				30
Link Distance (ft)		665			725			700				455
Travel Time (s)		15.1			16.5			15.9				10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	377	52	207	599	141	55	470	75	89	458	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	429	0	207	740	0	55	545	0	89	458	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		8

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0		4.0	6.0		4.0	6.0	6.0
Minimum Split (s)	11.0	37.0		11.0	37.0		11.0	27.0		11.0	27.0	27.0
Total Split (s)	11.0	71.0		20.0	80.0		11.0	34.0		13.0	36.0	36.0
Total Split (%)	8.0%	51.4%		14.5%	58.0%		8.0%	24.6%		9.4%	26.1%	26.1%
Maximum Green (s)	5.0	65.0		14.0	74.0		5.0	28.0		7.0	30.0	30.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		24.0			24.0			14.0			14.0	14.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effect Green (s)	47.6	42.4		59.9	52.3		26.1	22.5		28.8	23.8	23.8
Actuated g/C Ratio	0.45	0.40		0.57	0.50		0.25	0.21		0.27	0.23	0.23
v/c Ratio	0.25	0.58		0.45	0.82		0.25	0.73		0.44	0.57	0.15
Control Delay	14.6	27.6		14.9	32.8		34.2	47.6		38.6	42.7	0.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	14.6	27.6		14.9	32.8		34.2	47.6		38.6	42.7	0.6
LOS	B	C		B	C		C	D		D	D	A
Approach Delay		26.2			28.9			46.3			37.3	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 138

Actuated Cycle Length: 105.4

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 34.3

Intersection LOS: C

Intersection Capacity Utilization 78.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3152: N 46th Ave & Johnson St

 Ø1	 Ø2		 Ø3	 Ø4
11 s	80 s		13 s	34 s
 Ø5	 Ø6		 Ø7	 Ø8
20 s	71 s		11 s	36 s

Queues

3152: N 46th Ave & Johnson St

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	429	207	740	55	545	89	458	71
v/c Ratio	0.25	0.58	0.45	0.82	0.25	0.73	0.44	0.57	0.15
Control Delay	14.6	27.6	14.9	32.8	34.2	47.6	38.6	42.7	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.6	27.6	14.9	32.8	34.2	47.6	38.6	42.7	0.6
Queue Length 50th (ft)	16	226	69	453	27	189	45	153	0
Queue Length 95th (ft)	36	355	116	667	71	307	104	255	0
Internal Link Dist (ft)		585		645		620		375	
Turn Bay Length (ft)	220		300		250		130		130
Base Capacity (vph)	221	1187	509	1287	227	1030	217	1118	613
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.36	0.41	0.57	0.24	0.53	0.41	0.41	0.12
Intersection Summary									

HCM 6th Signalized Intersection Summary 3152: N 46th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	347	48	190	551	130	51	432	69	82	421	65
Future Volume (veh/h)	50	347	48	190	551	130	51	432	69	82	421	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	377	52	207	599	141	55	470	75	89	458	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	656	90	448	677	159	226	601	95	217	766	342
Arrive On Green	0.03	0.41	0.41	0.09	0.46	0.46	0.03	0.20	0.20	0.05	0.22	0.22
Sat Flow, veh/h	1781	1609	222	1781	1464	345	1781	3072	488	1781	3554	1585
Grp Volume(v), veh/h	54	0	429	207	0	740	55	271	274	89	458	71
Grp Sat Flow(s),veh/h/ln	1781	0	1830	1781	0	1808	1781	1777	1783	1781	1777	1585
Q Serve(g_s), s	1.6	0.0	17.1	6.1	0.0	35.0	2.3	13.6	13.8	3.7	10.9	3.5
Cycle Q Clear(g_c), s	1.6	0.0	17.1	6.1	0.0	35.0	2.3	13.6	13.8	3.7	10.9	3.5
Prop In Lane	1.00		0.12	1.00		0.19	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	199	0	747	448	0	836	226	348	349	217	766	342
V/C Ratio(X)	0.27	0.00	0.57	0.46	0.00	0.88	0.24	0.78	0.79	0.41	0.60	0.21
Avail Cap(c_a), veh/h	236	0	1264	559	0	1422	258	529	530	252	1133	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	0.0	21.6	15.2	0.0	23.0	29.2	35.9	36.0	29.0	33.3	30.3
Incr Delay (d2), s/veh	0.3	0.0	0.7	0.3	0.0	3.8	0.2	4.1	4.4	0.5	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	7.2	2.4	0.0	14.9	1.0	6.2	6.3	1.6	4.7	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	0.0	22.3	15.5	0.0	26.8	29.4	40.1	40.4	29.4	34.0	30.6
LnGrp LOS	C	A	C	B	A	C	C	D	D	C	C	C
Approach Vol, veh/h	483			947			600			618		
Approach Delay, s/veh	22.1			24.4			39.2			33.0		
Approach LOS	C			C			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	49.5	11.2	24.4	14.2	44.4	9.3	26.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	5.0	74.0	7.0	28.0	14.0	65.0	5.0	30.0				
Max Q Clear Time (g_c+I1), s	3.6	37.0	5.7	15.8	8.1	19.1	4.3	12.9				
Green Ext Time (p_c), s	0.0	6.5	0.0	2.6	0.1	3.1	0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay	29.3											
HCM 6th LOS	C											

Lanes, Volumes, Timings
3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	285	504	161	220	450	183	124	558	258	136	650	251
Future Volume (vph)	285	504	161	220	450	183	124	558	258	136	650	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.175			0.152			0.155			0.219		
Satd. Flow (perm)	326	1863	1583	283	1863	1583	289	3539	1583	408	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115			199			249			218
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	310	548	175	239	489	199	135	607	280	148	707	273
Shared Lane Traffic (%)												
Lane Group Flow (vph)	310	548	175	239	489	199	135	607	280	148	707	273
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4		4	8		8

Lanes, Volumes, Timings
3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	42.0	42.0	11.0	42.0	42.0	11.0	30.0	30.0	11.0	30.0	30.0
Total Split (s)	26.0	51.0	51.0	26.0	51.0	51.0	26.0	46.0	46.0	26.0	46.0	46.0
Total Split (%)	17.4%	34.2%	34.2%	17.4%	34.2%	34.2%	17.4%	30.9%	30.9%	17.4%	30.9%	30.9%
Maximum Green (s)	20.0	45.0	45.0	20.0	45.0	45.0	20.0	40.0	40.0	20.0	40.0	40.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		29.0	29.0		29.0	29.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	67.2	47.6	47.6	62.8	45.2	45.2	46.5	33.9	33.9	47.3	34.3	34.3
Actuated g/C Ratio	0.49	0.35	0.35	0.46	0.33	0.33	0.34	0.25	0.25	0.35	0.25	0.25
v/c Ratio	0.83	0.84	0.28	0.74	0.79	0.30	0.57	0.69	0.48	0.55	0.79	0.49
Control Delay	45.4	55.7	14.5	38.8	53.2	5.9	37.3	50.9	10.1	35.2	55.0	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	55.7	14.5	38.8	53.2	5.9	37.3	50.9	10.1	35.2	55.0	12.9
LOS	D	E	B	D	D	A	D	D	B	D	D	B
Approach Delay		45.6			39.3			37.9			42.2	
Approach LOS		D			D			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 149

Actuated Cycle Length: 136.2

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 41.4

Intersection LOS: D

Intersection Capacity Utilization 84.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3150: Johnson St & N Park Ave

			
Ø1	Ø2	Ø3	Ø4
26 s	51 s	26 s	46 s
			
Ø5	Ø6	Ø7	Ø8
26 s	51 s	26 s	46 s

Queues

3150: Johnson St & N Park Ave

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	310	548	175	239	489	199	135	607	280	148	707	273
v/c Ratio	0.83	0.84	0.28	0.74	0.79	0.30	0.57	0.69	0.48	0.55	0.79	0.49
Control Delay	45.4	55.7	14.5	38.8	53.2	5.9	37.3	50.9	10.1	35.2	55.0	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	55.7	14.5	38.8	53.2	5.9	37.3	50.9	10.1	35.2	55.0	12.9
Queue Length 50th (ft)	166	465	37	116	397	0	78	257	21	86	309	38
Queue Length 95th (ft)	#371	#750	105	#230	#625	59	125	336	101	136	395	122
Internal Link Dist (ft)	926				648				487		382	
Turn Bay Length (ft)	250		235		200		340		175		190	
Base Capacity (vph)	373	651	628	354	618	657	328	1043	642	357	1047	622
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.84	0.28	0.68	0.79	0.30	0.41	0.58	0.44	0.41	0.68	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3150: Johnson St & N Park Ave

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	504	161	220	450	183	124	558	258	136	650	251
Future Volume (veh/h)	285	504	161	220	450	183	124	558	258	136	650	251
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	310	548	175	239	489	199	135	607	280	148	707	273
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	386	722	612	337	676	573	222	850	379	251	871	388
Arrive On Green	0.13	0.39	0.39	0.10	0.36	0.36	0.07	0.24	0.24	0.08	0.24	0.24
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	310	548	175	239	489	199	135	607	280	148	707	273
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	13.4	31.7	9.5	10.3	28.1	11.4	7.0	19.5	20.3	7.7	23.3	19.6
Cycle Q Clear(g_c), s	13.4	31.7	9.5	10.3	28.1	11.4	7.0	19.5	20.3	7.7	23.3	19.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	386	722	612	337	676	573	222	850	379	251	871	388
V/C Ratio(X)	0.80	0.76	0.29	0.71	0.72	0.35	0.61	0.71	0.74	0.59	0.81	0.70
Avail Cap(c_a), veh/h	446	722	612	440	676	573	377	1142	509	396	1142	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	33.2	26.4	25.5	34.4	29.0	34.5	43.4	43.8	33.5	44.3	42.9
Incr Delay (d2), s/veh	8.9	7.3	1.2	3.6	6.6	1.7	2.7	1.4	3.8	2.2	3.5	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	15.7	3.8	4.6	13.9	4.6	3.2	8.7	8.4	3.5	10.7	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	40.5	27.5	29.2	41.0	30.7	37.2	44.8	47.6	35.7	47.8	45.8
LnGrp LOS	C	D	C	C	D	C	D	D	D	D	D	D
Approach Vol, veh/h	1033				927		1022				1128	
Approach Delay, s/veh	36.4				35.7		44.6				45.7	
Approach LOS	D				D		D				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.8	51.0	15.9	35.8	18.7	54.1	15.2	36.5				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	20.0	45.0	20.0	40.0	20.0	45.0	20.0	40.0				
Max Q Clear Time (g_c+I1), s	15.4	30.1	9.7	22.3	12.3	33.7	9.0	25.3				
Green Ext Time (p_c), s	0.4	3.4	0.3	4.9	0.4	3.3	0.2	5.2				
Intersection Summary												
HCM 6th Ctrl Delay			40.8									
HCM 6th LOS			D									



N 46th Avenue and Johnson Street —Optimized



Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

05/02/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	403	34	201	366	94	51	446	203	191	405	93
Future Volume (vph)	106	403	34	201	366	94	51	446	203	191	405	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	300		0	250		250	130		130
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.988			0.969			0.953				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1840	0	1770	1805	0	1770	3373	0	1770	3539	1583
Flt Permitted	0.247			0.145			0.497			0.146		
Satd. Flow (perm)	460	1840	0	270	1805	0	926	3373	0	272	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			11			50				166
Link Speed (mph)		30			30			30				30
Link Distance (ft)		855			1024			971				495
Travel Time (s)		19.4			23.3			22.1				11.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	438	37	218	398	102	55	485	221	208	440	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	475	0	218	500	0	55	706	0	208	440	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		8

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

05/02/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0		4.0	6.0		4.0	6.0	6.0
Minimum Split (s)	11.0	37.0		11.0	37.0		11.0	27.0		11.0	27.0	27.0
Total Split (s)	14.0	53.0		22.0	61.0		11.0	38.0		25.0	52.0	52.0
Total Split (%)	10.1%	38.4%		15.9%	44.2%		8.0%	27.5%		18.1%	37.7%	37.7%
Maximum Green (s)	8.0	47.0		16.0	55.0		5.0	32.0		19.0	46.0	46.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		24.0			24.0			14.0			14.0	14.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effect Green (s)	42.1	34.7		52.9	40.5		33.0	28.0		47.4	39.3	39.3
Actuated g/C Ratio	0.37	0.30		0.46	0.35		0.29	0.25		0.42	0.34	0.34
v/c Ratio	0.45	0.85		0.73	0.77		0.18	0.82		0.73	0.36	0.15
Control Delay	24.7	53.0		35.6	41.5		25.5	48.1		39.8	31.3	0.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	24.7	53.0		35.6	41.5		25.5	48.1		39.8	31.3	0.6
LOS	C	D		D	D		C	D		D	C	A
Approach Delay		47.5			39.7			46.4			29.5	
Approach LOS		D			D			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 138

Actuated Cycle Length: 114.2

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 40.4

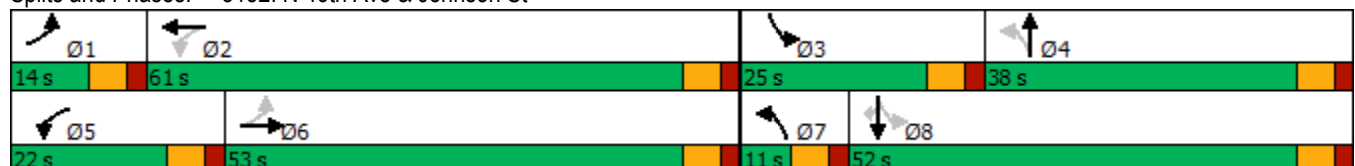
Intersection LOS: D

Intersection Capacity Utilization 83.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3152: N 46th Ave & Johnson St



Queues

3152: N 46th Ave & Johnson St

05/02/2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	115	475	218	500	55	706	208	440	101
v/c Ratio	0.45	0.85	0.73	0.77	0.18	0.82	0.73	0.36	0.15
Control Delay	24.7	53.0	35.6	41.5	25.5	48.1	39.8	31.3	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	53.0	35.6	41.5	25.5	48.1	39.8	31.3	0.6
Queue Length 50th (ft)	49	340	98	332	25	247	102	135	0
Queue Length 95th (ft)	91	513	180	494	58	#397	193	206	1
Internal Link Dist (ft)		775		944		891		415	
Turn Bay Length (ft)	220		300		250		130		130
Base Capacity (vph)	269	791	347	912	308	1021	373	1487	761
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.60	0.63	0.55	0.18	0.69	0.56	0.30	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

3152: N 46th Ave & Johnson St

05/02/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	403	34	201	366	94	51	446	203	191	405	93
Future Volume (veh/h)	106	403	34	201	366	94	51	446	203	191	405	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	438	37	218	398	102	55	485	221	208	440	101
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	503	43	308	486	125	327	593	269	301	1137	507
Arrive On Green	0.06	0.30	0.30	0.10	0.34	0.34	0.03	0.25	0.25	0.10	0.32	0.32
Sat Flow, veh/h	1781	1701	144	1781	1436	368	1781	2377	1077	1781	3554	1585
Grp Volume(v), veh/h	115	0	475	218	0	500	55	362	344	208	440	101
Grp Sat Flow(s),veh/h/ln	1781	0	1844	1781	0	1804	1781	1777	1677	1781	1777	1585
Q Serve(g_s), s	4.3	0.0	23.8	8.1	0.0	24.8	2.2	18.7	18.9	8.1	9.4	4.5
Cycle Q Clear(g_c), s	4.3	0.0	23.8	8.1	0.0	24.8	2.2	18.7	18.9	8.1	9.4	4.5
Prop In Lane	1.00		0.08	1.00		0.20	1.00		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	261	0	546	308	0	611	327	443	418	301	1137	507
V/C Ratio(X)	0.44	0.00	0.87	0.71	0.00	0.82	0.17	0.82	0.82	0.69	0.39	0.20
Avail Cap(c_a), veh/h	296	0	888	413	0	1017	359	583	550	462	1675	747
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	32.6	23.6	0.0	29.5	25.9	34.5	34.6	24.7	25.8	24.1
Incr Delay (d2), s/veh	0.4	0.0	5.5	1.8	0.0	2.8	0.1	6.8	7.6	1.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	11.2	3.5	0.0	10.9	0.9	8.8	8.4	3.4	3.9	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	0.0	38.1	25.5	0.0	32.3	26.0	41.3	42.2	25.7	26.0	24.3
LnGrp LOS	C	A	D	C	A	C	C	D	D	C	C	C
Approach Vol, veh/h	590				718				761			
Approach Delay, s/veh	35.4				30.2				40.6			
Approach LOS	D				C				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.1	39.0	16.2	30.3	16.2	34.9	9.3	37.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	8.0	55.0	19.0	32.0	16.0	47.0	5.0	46.0				
Max Q Clear Time (g_c+I1), s	6.3	26.8	10.1	20.9	10.1	25.8	4.2	11.4				
Green Ext Time (p_c), s	0.0	3.6	0.1	3.4	0.1	3.0	0.0	3.6				
Intersection Summary												
HCM 6th Ctrl Delay	32.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	347	48	190	551	130	51	432	69	82	421	65
Future Volume (vph)	50	347	48	190	551	130	51	432	69	82	421	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	300		0	250		250	130		130
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.982			0.971			0.979				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1829	0	1770	1809	0	1770	3465	0	1770	3539	1583
Flt Permitted	0.171			0.314			0.369			0.233		
Satd. Flow (perm)	319	1829	0	585	1809	0	687	3465	0	434	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			13			12				166
Link Speed (mph)		30			30			30				30
Link Distance (ft)		665			725			700				455
Travel Time (s)		15.1			16.5			15.9				10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	377	52	207	599	141	55	470	75	89	458	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	429	0	207	740	0	55	545	0	89	458	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		8

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0		4.0	6.0		4.0	6.0	6.0
Minimum Split (s)	11.0	37.0		11.0	37.0		11.0	27.0		11.0	27.0	27.0
Total Split (s)	11.0	71.0		20.0	80.0		11.0	34.0		13.0	36.0	36.0
Total Split (%)	8.0%	51.4%		14.5%	58.0%		8.0%	24.6%		9.4%	26.1%	26.1%
Maximum Green (s)	5.0	65.0		14.0	74.0		5.0	28.0		7.0	30.0	30.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		24.0			24.0			14.0			14.0	14.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effect Green (s)	47.6	42.4		59.9	52.3		26.1	22.5		28.8	23.8	23.8
Actuated g/C Ratio	0.45	0.40		0.57	0.50		0.25	0.21		0.27	0.23	0.23
v/c Ratio	0.25	0.58		0.45	0.82		0.25	0.73		0.44	0.57	0.15
Control Delay	14.6	27.6		14.9	32.8		34.2	47.6		38.6	42.7	0.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	14.6	27.6		14.9	32.8		34.2	47.6		38.6	42.7	0.6
LOS	B	C		B	C		C	D		D	D	A
Approach Delay		26.2			28.9			46.3			37.3	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 138

Actuated Cycle Length: 105.4

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 34.3

Intersection LOS: C

Intersection Capacity Utilization 78.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3152: N 46th Ave & Johnson St

 Ø1	 Ø2	 Ø3	 Ø4
11 s	80 s	13 s	34 s
 Ø5	 Ø6	 Ø7	 Ø8
20 s	71 s	11 s	36 s

Queues

3152: N 46th Ave & Johnson St

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	429	207	740	55	545	89	458	71
v/c Ratio	0.25	0.58	0.45	0.82	0.25	0.73	0.44	0.57	0.15
Control Delay	14.6	27.6	14.9	32.8	34.2	47.6	38.6	42.7	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.6	27.6	14.9	32.8	34.2	47.6	38.6	42.7	0.6
Queue Length 50th (ft)	16	226	69	453	27	189	45	153	0
Queue Length 95th (ft)	36	355	116	667	71	307	104	255	0
Internal Link Dist (ft)		585		645		620		375	
Turn Bay Length (ft)	220		300		250		130		130
Base Capacity (vph)	221	1187	509	1287	227	1030	217	1118	613
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.36	0.41	0.57	0.24	0.53	0.41	0.41	0.12
Intersection Summary									

HCM 6th Signalized Intersection Summary 3152: N 46th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	347	48	190	551	130	51	432	69	82	421	65
Future Volume (veh/h)	50	347	48	190	551	130	51	432	69	82	421	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	377	52	207	599	141	55	470	75	89	458	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	656	90	448	677	159	226	601	95	217	766	342
Arrive On Green	0.03	0.41	0.41	0.09	0.46	0.46	0.03	0.20	0.20	0.05	0.22	0.22
Sat Flow, veh/h	1781	1609	222	1781	1464	345	1781	3072	488	1781	3554	1585
Grp Volume(v), veh/h	54	0	429	207	0	740	55	271	274	89	458	71
Grp Sat Flow(s),veh/h/ln	1781	0	1830	1781	0	1808	1781	1777	1783	1781	1777	1585
Q Serve(g_s), s	1.6	0.0	17.1	6.1	0.0	35.0	2.3	13.6	13.8	3.7	10.9	3.5
Cycle Q Clear(g_c), s	1.6	0.0	17.1	6.1	0.0	35.0	2.3	13.6	13.8	3.7	10.9	3.5
Prop In Lane	1.00		0.12	1.00		0.19	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	199	0	747	448	0	836	226	348	349	217	766	342
V/C Ratio(X)	0.27	0.00	0.57	0.46	0.00	0.88	0.24	0.78	0.79	0.41	0.60	0.21
Avail Cap(c_a), veh/h	236	0	1264	559	0	1422	258	529	530	252	1133	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	0.0	21.6	15.2	0.0	23.0	29.2	35.9	36.0	29.0	33.3	30.3
Incr Delay (d2), s/veh	0.3	0.0	0.7	0.3	0.0	3.8	0.2	4.1	4.4	0.5	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	7.2	2.4	0.0	14.9	1.0	6.2	6.3	1.6	4.7	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	0.0	22.3	15.5	0.0	26.8	29.4	40.1	40.4	29.4	34.0	30.6
LnGrp LOS	C	A	C	B	A	C	C	D	D	C	C	C
Approach Vol, veh/h	483			947			600			618		
Approach Delay, s/veh	22.1			24.4			39.2			33.0		
Approach LOS	C			C			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	49.5	11.2	24.4	14.2	44.4	9.3	26.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	5.0	74.0	7.0	28.0	14.0	65.0	5.0	30.0				
Max Q Clear Time (g_c+I1), s	3.6	37.0	5.7	15.8	8.1	19.1	4.3	12.9				
Green Ext Time (p_c), s	0.0	6.5	0.0	2.6	0.1	3.1	0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay	29.3											
HCM 6th LOS	C											



Option 1:

- One westbound left-turn lane
- One westbound through lane
- One westbound shared through/right-turn lane



Lanes, Volumes, Timings
3151: N 35th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	475	59	123	597	298	262	241	122	258	126	56
Future Volume (vph)	61	475	59	123	597	298	262	241	122	258	126	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.984			0.950				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1833	0	1770	3362	0	1770	3539	1583	1770	1863	1583
Flt Permitted	0.135			0.128			0.671			0.548		
Satd. Flow (perm)	251	1833	0	238	3362	0	1250	3539	1583	1021	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			102				182			182
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	66	511	63	132	642	320	282	259	131	277	135	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	574	0	132	962	0	282	259	131	277	135	60
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4		4	8		8

Lanes, Volumes, Timings
3151: N 35th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	2.0	12.0		2.0	12.0		2.0	6.0	6.0	2.0	6.0	6.0
Minimum Split (s)	11.0	31.0		11.0	31.0		11.0	31.0	31.0	11.0	33.0	33.0
Total Split (s)	11.0	35.0		11.0	35.0		11.0	31.0	31.0	13.0	33.0	33.0
Total Split (%)	12.2%	38.9%		12.2%	38.9%		12.2%	34.4%	34.4%	14.4%	36.7%	36.7%
Maximum Green (s)	5.0	29.0		5.0	29.0		5.0	25.0	25.0	7.0	27.0	27.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max		None	Max	Max	None	Max	Max
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0			18.0			18.0	18.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effect Green (s)	34.0	29.0		35.2	31.2		30.0	25.0	25.0	34.0	27.0	27.0
Actuated g/C Ratio	0.38	0.32		0.39	0.35		0.33	0.28	0.28	0.38	0.30	0.30
v/c Ratio	0.37	0.96		0.74	0.78		0.63	0.26	0.23	0.63	0.24	0.10
Control Delay	20.8	60.6		43.7	29.7		29.4	26.2	2.5	26.8	25.2	0.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	60.6		43.7	29.7		29.4	26.2	2.5	26.8	25.2	0.3
LOS	C	E		D	C		C	C	A	C	C	A
Approach Delay		56.5			31.3			22.9			23.0	
Approach LOS		E			C			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 33.6

Intersection LOS: C

Intersection Capacity Utilization 76.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3151: N 35th Ave & Johnson St

			
Ø1	Ø2	Ø3	Ø4
11 s	35 s	13 s	31 s
			
Ø5	Ø6	Ø7	Ø8
11 s	35 s	11 s	33 s

Queues

3151: N 35th Ave & Johnson St

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	66	574	132	962	282	259	131	277	135	60
v/c Ratio	0.37	0.96	0.74	0.78	0.63	0.26	0.23	0.63	0.24	0.10
Control Delay	20.8	60.6	43.7	29.7	29.4	26.2	2.5	26.8	25.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	60.6	43.7	29.7	29.4	26.2	2.5	26.8	25.2	0.3
Queue Length 50th (ft)	21	315	44	238	107	60	0	105	58	0
Queue Length 95th (ft)	45	#531	#117	#322	171	92	18	168	104	0
Internal Link Dist (ft)		605		926		615			269	
Turn Bay Length (ft)	140		220		160		150	240		500
Base Capacity (vph)	179	595	178	1232	445	983	571	443	558	602
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.96	0.74	0.78	0.63	0.26	0.23	0.63	0.24	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3151: N 35th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	475	59	123	597	298	262	241	122	258	126	56
Future Volume (veh/h)	61	475	59	123	597	298	262	241	122	258	126	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	511	63	132	642	320	282	259	131	277	135	60
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	526	65	190	780	389	471	987	440	438	561	476
Arrive On Green	0.04	0.32	0.32	0.06	0.34	0.34	0.06	0.28	0.28	0.08	0.30	0.30
Sat Flow, veh/h	1781	1633	201	1781	2297	1145	1781	3554	1585	1781	1870	1585
Grp Volume(v), veh/h	66	0	574	132	497	465	282	259	131	277	135	60
Grp Sat Flow(s),veh/h/ln	1781	0	1834	1781	1777	1664	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	2.2	0.0	27.8	4.5	23.1	23.1	5.0	5.1	5.9	7.0	4.9	2.5
Cycle Q Clear(g_c), s	2.2	0.0	27.8	4.5	23.1	23.1	5.0	5.1	5.9	7.0	4.9	2.5
Prop In Lane	1.00		0.11	1.00		0.69	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	196	0	591	190	604	566	471	987	440	438	561	476
V/C Ratio(X)	0.34	0.00	0.97	0.69	0.82	0.82	0.60	0.26	0.30	0.63	0.24	0.13
Avail Cap(c_a), veh/h	228	0	591	190	604	566	471	987	440	438	561	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	0.0	30.1	23.4	27.2	27.2	26.0	25.3	25.6	24.4	23.8	22.9
Incr Delay (d2), s/veh	1.0	0.0	30.6	10.4	12.0	12.7	2.1	0.6	1.7	2.9	1.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	16.8	2.3	11.4	10.8	2.9	2.2	2.4	1.9	2.3	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.0	0.0	60.7	33.8	39.2	39.9	28.1	26.0	27.3	27.3	24.8	23.5
LnGrp LOS	C	A	E	C	D	D	C	C	C	C	C	C
Approach Vol, veh/h	640		1094				672		472			
Approach Delay, s/veh	56.8		38.9				27.1		26.1			
Approach LOS	E		D				C		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	36.6	13.0	31.0	11.0	35.0	11.0	33.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	5.0	29.0	7.0	25.0	5.0	29.0	5.0	27.0				
Max Q Clear Time (g_c+I1), s	4.2	25.1	9.0	7.9	6.5	29.8	7.0	6.9				
Green Ext Time (p_c), s	0.0	2.2	0.0	1.9	0.0	0.0	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay	38.0											
HCM 6th LOS	D											

Lanes, Volumes, Timings
3151: N 35th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	434	137	162	511	148	84	74	116	374	192	121
Future Volume (vph)	43	434	137	162	511	148	84	74	116	374	192	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.964				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1796	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.271			0.150			0.627			0.567		
Satd. Flow (perm)	505	1796	0	279	1863	1583	1168	3539	1583	1056	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19				182			182			182
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	472	149	176	555	161	91	80	126	407	209	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	621	0	176	555	161	91	80	126	407	209	132
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8

Lanes, Volumes, Timings
3151: N 35th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	31.0		11.0	31.0	31.0	11.0	31.0	31.0	11.0	33.0	33.0
Total Split (s)	11.0	35.0		11.0	35.0	35.0	11.0	31.0	31.0	13.0	33.0	33.0
Total Split (%)	12.2%	38.9%		12.2%	38.9%	38.9%	12.2%	34.4%	34.4%	14.4%	36.7%	36.7%
Maximum Green (s)	5.0	29.0		5.0	29.0	29.0	5.0	25.0	25.0	7.0	27.0	27.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0			18.0	18.0		18.0	18.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effect Green (s)	34.1	29.1		36.6	33.7	33.7	16.7	11.7	11.7	21.6	16.1	16.1
Actuated g/C Ratio	0.44	0.38		0.48	0.44	0.44	0.22	0.15	0.15	0.28	0.21	0.21
v/c Ratio	0.15	0.90		0.77	0.68	0.20	0.31	0.15	0.32	1.13	0.54	0.28
Control Delay	11.8	41.7		38.4	25.9	3.1	21.8	28.0	3.8	113.2	33.6	3.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.8	41.7		38.4	25.9	3.1	21.8	28.0	3.8	113.2	33.6	3.2
LOS	B	D		D	C	A	C	C	A	F	C	A
Approach Delay		39.6			24.2			15.8			71.5	
Approach LOS		D			C			B			E	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 76.9

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 40.8

Intersection LOS: D

Intersection Capacity Utilization 85.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3151: N 35th Ave & Johnson St

 Ø1	 Ø2	 Ø3	 Ø4
11 s	35 s	13 s	31 s
 Ø5	 Ø6	 Ø7	 Ø8
11 s	35 s	11 s	33 s

Queues

3151: N 35th Ave & Johnson St

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	621	176	555	161	91	80	126	407	209	132
v/c Ratio	0.15	0.90	0.77	0.68	0.20	0.31	0.15	0.32	1.13	0.54	0.28
Control Delay	11.8	41.7	38.4	25.9	3.1	21.8	28.0	3.8	113.2	33.6	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.8	41.7	38.4	25.9	3.1	21.8	28.0	3.8	113.2	33.6	3.2
Queue Length 50th (ft)	10	266	42	229	0	31	17	0	~204	93	0
Queue Length 95th (ft)	30	#529	#150	#446	31	62	35	17	#397	158	20
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	306	690	230	817	796	293	1153	638	361	655	675
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.90	0.77	0.68	0.20	0.31	0.07	0.20	1.13	0.32	0.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3151: N 35th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	434	137	162	511	148	84	74	116	374	192	121
Future Volume (veh/h)	43	434	137	162	511	148	84	74	116	374	192	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	472	149	176	555	161	91	80	126	407	209	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	294	536	169	276	799	677	254	423	189	383	287	243
Arrive On Green	0.03	0.39	0.39	0.07	0.43	0.43	0.06	0.12	0.12	0.09	0.15	0.15
Sat Flow, veh/h	1781	1363	430	1781	1870	1585	1781	3554	1585	1781	1870	1585
Grp Volume(v), veh/h	47	0	621	176	555	161	91	80	126	407	209	132
Grp Sat Flow(s),veh/h/ln	1781	0	1793	1781	1870	1585	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	1.1	0.0	23.7	4.4	17.8	4.8	3.3	1.5	5.6	7.0	7.9	5.7
Cycle Q Clear(g_c), s	1.1	0.0	23.7	4.4	17.8	4.8	3.3	1.5	5.6	7.0	7.9	5.7
Prop In Lane	1.00		0.24	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	294	0	705	276	799	677	254	423	189	383	287	243
V/C Ratio(X)	0.16	0.00	0.88	0.64	0.69	0.24	0.36	0.19	0.67	1.06	0.73	0.54
Avail Cap(c_a), veh/h	355	0	705	276	799	677	267	1204	537	383	685	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	0.0	20.8	16.7	17.2	13.5	26.4	29.3	31.1	30.4	29.8	28.8
Incr Delay (d2), s/veh	0.3	0.0	14.8	4.8	4.9	0.8	0.9	0.2	4.0	63.9	3.5	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	12.0	2.0	8.1	1.7	1.4	0.6	2.3	10.1	3.7	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.4	0.0	35.6	21.6	22.1	14.3	27.3	29.5	35.2	94.3	33.3	30.7
LnGrp LOS	B	A	D	C	C	B	C	C	D	F	C	C
Approach Vol, veh/h		668			892			297			748	
Approach Delay, s/veh		34.1			20.6			31.2			66.0	
Approach LOS		C			C			C			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	37.5	13.0	14.8	11.0	35.0	10.4	17.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	5.0	29.0	7.0	25.0	5.0	29.0	5.0	27.0				
Max Q Clear Time (g_c+I1), s	3.1	19.8	9.0	7.6	6.4	25.7	5.3	9.9				
Green Ext Time (p_c), s	0.0	2.9	0.0	0.8	0.0	1.3	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			38.3									
HCM 6th LOS			D									

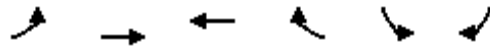


- Option 2:**
- **70/30 distribution**
 - **50/50 distribution**



Lanes, Volumes, Timings

23: Johnson St & Hospital Emergency Entrance



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	66	679	744	65	67	119
Future Volume (vph)	66	679	744	65	67	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			220	52	66
Storage Lanes	0			1	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1863	1583	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		306	685		513	
Travel Time (s)		7.0	15.6		11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	738	809	71	73	129
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	738	809	71	73	129
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.5%			ICU Level of Service B		
Analysis Period (min)	15					

HCM 6th TWSC
23: Johnson St & Hospital Emergency Entrance

Intersection						
Int Delay, s/veh	6.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	66	679	744	65	67	119
Future Vol, veh/h	66	679	744	65	67	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	738	809	71	73	129
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	880	0	-	0	1691	809
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	882	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	768	-	-	-	103	380
Stage 1	-	-	-	-	438	-
Stage 2	-	-	-	-	405	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	768	-	-	-	93	380
Mov Cap-2 Maneuver	-	-	-	-	93	-
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	405	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		56.1		
HCM LOS	F					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	768	-	-	-	93	380
HCM Lane V/C Ratio	0.093	-	-	-	0.783	0.34
HCM Control Delay (s)	10.2	-	-	-	121.5	19.3
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	-	-	4.1	1.5

Lanes, Volumes, Timings

21: Johnson St & Employee Parking Garage

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	524	5	9	769	10	2	0	62	156	0	364
Future Volume (vph)	40	524	5	9	769	10	2	0	62	156	0	364
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270		0	0		120	0		0	130		120
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.998			0.869				0.850
Flt Protected	0.950			0.950				0.999		0.950		
Satd. Flow (prot)	1770	1861	0	1770	1859	0	0	1617	0	1770	0	1583
Flt Permitted	0.112			0.338				0.999		0.950		
Satd. Flow (perm)	209	1861	0	630	1859	0	0	1617	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1			142				396
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		665			306			73			508	
Travel Time (s)		15.1			7.0			1.7			11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	570	5	10	836	11	2	0	67	170	0	396
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	575	0	10	847	0	0	69	0	170	0	396
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1		1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100		20	100		20	100		20		20
Trailing Detector (ft)	0	0		0	0		0	0		0		0
Detector 1 Position(ft)	0	0		0	0		0	0		0		0
Detector 1 Size(ft)	20	6		20	6		20	6		20		20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Prot		Perm
Protected Phases	1	6		5	2			4		3		
Permitted Phases	6			2			4					6

Lanes, Volumes, Timings

21: Johnson St & Employee Parking Garage

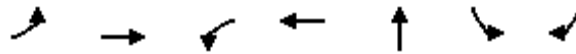
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		4	4		3		6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	24.0		11.0	24.0		24.0	24.0		24.0		24.0
Total Split (s)	11.0	56.0		11.0	56.0		24.0	24.0		24.0		56.0
Total Split (%)	9.6%	48.7%		9.6%	48.7%		20.9%	20.9%		20.9%		48.7%
Maximum Green (s)	5.0	50.0		5.0	50.0		18.0	18.0		18.0		50.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0		0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0		6.0		6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead		Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	Min		None	Min		Min	Min		Min		Min
Walk Time (s)		7.0			7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0		11.0
Pedestrian Calls (#/hr)		0			0		0	0		0		0
Act Effct Green (s)	55.5	54.5		53.2	50.4			5.5		14.0		54.5
Actuated g/C Ratio	0.59	0.58		0.56	0.53			0.06		0.15		0.58
v/c Ratio	0.21	0.53		0.02	0.85			0.30		0.65		0.37
Control Delay	10.8	15.7		8.6	31.1			3.4		50.5		2.4
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0		0.0
Total Delay	10.8	15.7		8.6	31.1			3.4		50.5		2.4
LOS	B	B		A	C			A		D		A
Approach Delay		15.4			30.9			3.4			16.9	
Approach LOS		B			C			A			B	
Intersection Summary												
Area Type: Other												
Cycle Length: 115												
Actuated Cycle Length: 94.3												
Natural Cycle: 115												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 0.85												
Intersection Signal Delay: 21.7												
Intersection LOS: C												
Intersection Capacity Utilization 82.8%												
ICU Level of Service E												
Analysis Period (min) 15												

Splits and Phases: 21: Johnson St & Employee Parking Garage

			
Ø1	Ø2	Ø3	Ø4
11 s	56 s	24 s	24 s
			
Ø5	Ø6		
11 s	56 s		

Queues

21: Johnson St & Employee Parking Garage



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBR
Lane Group Flow (vph)	43	575	10	847	69	170	396
v/c Ratio	0.21	0.53	0.02	0.85	0.30	0.65	0.37
Control Delay	10.8	15.7	8.6	31.1	3.4	50.5	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.8	15.7	8.6	31.1	3.4	50.5	2.4
Queue Length 50th (ft)	10	186	2	467	0	103	0
Queue Length 95th (ft)	25	387	9	#775	0	171	48
Internal Link Dist (ft)		585		226	1		
Turn Bay Length (ft)	270					130	120
Base Capacity (vph)	206	1076	416	994	425	340	1082
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.53	0.02	0.85	0.16	0.50	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 21: Johnson St & Employee Parking Garage

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	524	5	9	769	10	2	0	62	156	0	364
Future Volume (veh/h)	40	524	5	9	769	10	2	0	62	156	0	364
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	43	570	5	10	836	11	2	0	67	170	0	396
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	0	2
Cap, veh/h	207	973	9	370	921	12	44	0	0	213	0	0
Arrive On Green	0.04	0.53	0.53	0.01	0.50	0.50	0.06	0.00	0.06	0.12	0.00	0.00
Sat Flow, veh/h	1781	1851	16	1781	1842	24	0	0	0	1781	170	
Grp Volume(v), veh/h	43	0	575	10	0	847	69	0	0	170	43.0	
Grp Sat Flow(s),veh/h/ln	1781	0	1867	1781	0	1866	0	0	0	1781	D	
Q Serve(g_s), s	1.0	0.0	17.9	0.2	0.0	35.2	0.0	0.0	0.0	7.9		
Cycle Q Clear(g_c), s	1.0	0.0	17.9	0.2	0.0	35.2	0.1	0.0	0.0	7.9		
Prop In Lane	1.00		0.01	1.00		0.01	0.03		0.97	1.00		
Lane Grp Cap(c), veh/h	207	0	981	370	0	933	44	0	0	213		
V/C Ratio(X)	0.21	0.00	0.59	0.03	0.00	0.91	1.58	0.00	0.00	0.80		
Avail Cap(c_a), veh/h	245	0	1103	454	0	1102	283	0	0	379		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	17.1	0.0	13.8	11.6	0.0	19.4	37.6	0.0	0.0	36.3		
Incr Delay (d2), s/veh	0.5	0.0	0.6	0.0	0.0	9.8	281.9	0.0	0.0	6.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.4	0.0	7.0	0.1	0.0	16.3	4.3	0.0	0.0	3.7		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.6	0.0	14.4	11.6	0.0	29.1	319.4	0.0	0.0	43.0		
LnGrp LOS	B	A	B	B	A	C	F	A	A	D		
Approach Vol, veh/h	618			857			69					
Approach Delay, s/veh	14.6			28.9			319.4					
Approach LOS	B			C			F					
Timer - Assigned Phs	1	2	3	4	5	6						
Phs Duration (G+Y+Rc), s	9.2	48.3	16.1	11.0	7.0	50.5						
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0						
Max Green Setting (Gmax), s	5.0	50.0	18.0	18.0	5.0	50.0						
Max Q Clear Time (g_c+I1), s	3.0	37.2	9.9	2.1	2.2	19.9						
Green Ext Time (p_c), s	0.0	5.2	0.3	0.3	0.0	4.2						
Intersection Summary												
HCM 6th Ctrl Delay	36.9											
HCM 6th LOS	D											

Lanes, Volumes, Timings
3151: N 35th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	434	293	162	511	148	84	74	116	374	192	121
Future Volume (vph)	43	434	293	162	511	148	84	74	116	374	192	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.940				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1751	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.343			0.084			0.627			0.509		
Satd. Flow (perm)	639	1751	0	156	1863	1583	1168	3539	1583	948	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				161			149			149
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	472	318	176	555	161	91	80	126	407	209	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	790	0	176	555	161	91	80	126	407	209	132
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8

Lanes, Volumes, Timings
3151: N 35th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	31.0		11.0	31.0	31.0	11.0	31.0	31.0	11.0	33.0	33.0
Total Split (s)	11.0	51.0		13.0	53.0	53.0	11.0	31.0	31.0	15.0	35.0	35.0
Total Split (%)	10.0%	46.4%		11.8%	48.2%	48.2%	10.0%	28.2%	28.2%	13.6%	31.8%	31.8%
Maximum Green (s)	5.0	45.0		7.0	47.0	47.0	5.0	25.0	25.0	9.0	29.0	29.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0			18.0	18.0		18.0	18.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effect Green (s)	50.1	45.1		55.8	51.7	51.7	17.1	12.1	12.1	25.6	18.5	18.5
Actuated g/C Ratio	0.51	0.46		0.57	0.53	0.53	0.18	0.12	0.12	0.26	0.19	0.19
v/c Ratio	0.12	0.95		0.86	0.56	0.18	0.39	0.18	0.39	1.25	0.59	0.31
Control Delay	10.4	47.3		55.9	20.3	3.2	32.5	38.2	7.7	167.5	44.3	6.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	47.3		55.9	20.3	3.2	32.5	38.2	7.7	167.5	44.3	6.4
LOS	B	D		E	C	A	C	D	A	F	D	A
Approach Delay		45.2			24.2			23.5			104.6	
Approach LOS		D			C			C			F	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 97.3

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.25

Intersection Signal Delay: 52.2

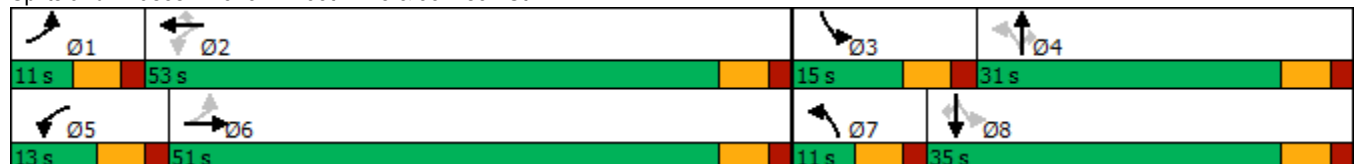
Intersection LOS: D

Intersection Capacity Utilization 95.4%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 3151: N 35th Ave & Johnson St



Queues

3151: N 35th Ave & Johnson St

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	790	176	555	161	91	80	126	407	209	132
v/c Ratio	0.12	0.95	0.86	0.56	0.18	0.39	0.18	0.39	1.25	0.59	0.31
Control Delay	10.4	47.3	55.9	20.3	3.2	32.5	38.2	7.7	167.5	44.3	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	47.3	55.9	20.3	3.2	32.5	38.2	7.7	167.5	44.3	6.4
Queue Length 50th (ft)	11	436	57	242	0	43	23	0	~216	123	0
Queue Length 95th (ft)	30	#782	#202	405	36	81	44	35	#502	197	38
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	387	831	205	990	916	236	911	518	325	556	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.95	0.86	0.56	0.18	0.39	0.09	0.24	1.25	0.38	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3151: N 35th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	434	293	162	511	148	84	74	116	374	192	121
Future Volume (veh/h)	43	434	293	162	511	148	84	74	116	374	192	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	472	318	176	555	161	91	80	126	407	209	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	358	495	334	229	964	817	213	377	168	346	277	235
Arrive On Green	0.03	0.48	0.48	0.07	0.52	0.52	0.05	0.11	0.11	0.10	0.15	0.15
Sat Flow, veh/h	1781	1042	702	1781	1870	1585	1781	3554	1585	1781	1870	1585
Grp Volume(v), veh/h	47	0	790	176	555	161	91	80	126	407	209	132
Grp Sat Flow(s),veh/h/ln	1781	0	1744	1781	1870	1585	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	1.3	0.0	41.2	4.7	19.4	5.2	4.3	1.9	7.3	9.0	10.1	7.3
Cycle Q Clear(g_c), s	1.3	0.0	41.2	4.7	19.4	5.2	4.3	1.9	7.3	9.0	10.1	7.3
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	358	0	829	229	964	817	213	377	168	346	277	235
V/C Ratio(X)	0.13	0.00	0.95	0.77	0.58	0.20	0.43	0.21	0.75	1.18	0.75	0.56
Avail Cap(c_a), veh/h	399	0	829	235	964	817	213	938	418	346	573	485
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	0.0	23.8	21.2	15.8	12.4	35.5	38.7	41.1	39.1	38.7	37.5
Incr Delay (d2), s/veh	0.2	0.0	21.8	13.8	2.5	0.5	1.4	0.3	6.6	105.8	4.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	20.8	2.6	8.4	1.9	1.9	0.9	3.1	13.8	4.9	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	0.0	45.6	35.1	18.3	12.9	36.9	39.0	47.7	144.8	42.8	39.6
LnGrp LOS	B	A	D	D	B	B	D	D	D	F	D	D
Approach Vol, veh/h		837			892			297			748	
Approach Delay, s/veh		43.8			20.6			42.0			97.8	
Approach LOS		D			C			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	54.8	15.0	16.0	12.7	51.0	11.0	20.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	5.0	47.0	9.0	25.0	7.0	45.0	5.0	29.0				
Max Q Clear Time (g_c+I1), s	3.3	21.4	11.0	9.3	6.7	43.2	6.3	12.1				
Green Ext Time (p_c), s	0.0	4.5	0.0	0.7	0.0	1.0	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			50.7									
HCM 6th LOS			D									

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	347	48	149	471	96	51	432	69	82	421	65
Future Volume (vph)	50	347	48	149	471	96	51	432	69	82	421	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	300		0	250		250	130		130
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.982			0.975			0.979				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1829	0	1770	1816	0	1770	3465	0	1770	3539	1583
Flt Permitted	0.279			0.364			0.354			0.196		
Satd. Flow (perm)	520	1829	0	678	1816	0	659	3465	0	365	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			8			12				119
Link Speed (mph)		30			30			30				30
Link Distance (ft)		665			725			700				455
Travel Time (s)		15.1			16.5			15.9				10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	377	52	162	512	104	55	470	75	89	458	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	429	0	162	616	0	55	545	0	89	458	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		8

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0		4.0	6.0		4.0	6.0	6.0
Minimum Split (s)	11.0	37.0		11.0	37.0		11.0	27.0		11.0	27.0	27.0
Total Split (s)	22.0	56.0		22.0	56.0		24.0	36.0		24.0	36.0	36.0
Total Split (%)	15.9%	40.6%		15.9%	40.6%		17.4%	26.1%		17.4%	26.1%	26.1%
Maximum Green (s)	16.0	50.0		16.0	50.0		18.0	30.0		18.0	30.0	30.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		24.0			24.0			14.0			14.0	14.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effect Green (s)	74.1	68.3		82.8	74.3		34.1	27.2		38.7	31.1	31.1
Actuated g/C Ratio	0.54	0.49		0.60	0.54		0.25	0.20		0.28	0.23	0.23
v/c Ratio	0.16	0.47		0.34	0.63		0.25	0.79		0.47	0.58	0.16
Control Delay	14.4	27.0		14.9	28.2		35.1	59.9		41.4	50.5	1.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	14.4	27.0		14.9	28.2		35.1	59.9		41.4	50.5	1.5
LOS	B	C		B	C		D	E		D	D	A
Approach Delay		25.6			25.4			57.6			43.6	
Approach LOS		C			C			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 37.8

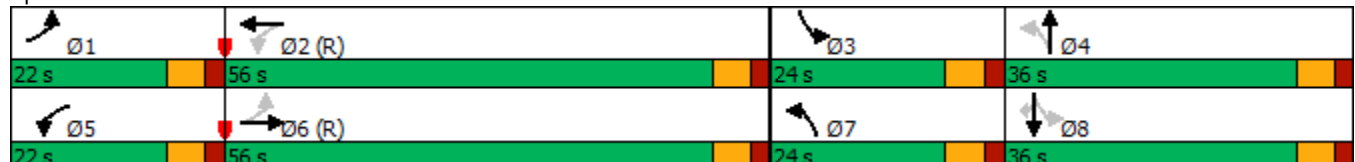
Intersection LOS: D

Intersection Capacity Utilization 72.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3152: N 46th Ave & Johnson St



Queues

3152: N 46th Ave & Johnson St

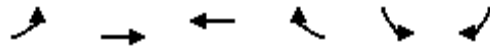
									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	429	162	616	55	545	89	458	71
v/c Ratio	0.16	0.47	0.34	0.63	0.25	0.79	0.47	0.58	0.16
Control Delay	14.4	27.0	14.9	28.2	35.1	59.9	41.4	50.5	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	27.0	14.9	28.2	35.1	59.9	41.4	50.5	1.5
Queue Length 50th (ft)	19	243	60	382	35	242	59	197	0
Queue Length 95th (ft)	44	412	112	617	62	291	92	239	6
Internal Link Dist (ft)		585		645		620		375	
Turn Bay Length (ft)	220		300		250		130		130
Base Capacity (vph)	457	908	539	981	345	781	294	821	458
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.47	0.30	0.63	0.16	0.70	0.30	0.56	0.16
Intersection Summary									

HCM 6th Signalized Intersection Summary 3152: N 46th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	347	48	149	471	96	51	432	69	82	421	65
Future Volume (veh/h)	50	347	48	149	471	96	51	432	69	82	421	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	377	52	162	512	104	55	470	75	89	458	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	378	867	120	533	859	174	182	547	87	172	698	312
Arrive On Green	0.03	0.54	0.54	0.06	0.57	0.57	0.03	0.18	0.18	0.05	0.20	0.20
Sat Flow, veh/h	1781	1609	222	1781	1509	306	1781	3072	488	1781	3554	1585
Grp Volume(v), veh/h	54	0	429	162	0	616	55	271	274	89	458	71
Grp Sat Flow(s),veh/h/ln	1781	0	1830	1781	0	1815	1781	1777	1783	1781	1777	1585
Q Serve(g_s), s	1.9	0.0	19.5	5.6	0.0	30.5	3.5	20.4	20.6	5.6	16.4	5.2
Cycle Q Clear(g_c), s	1.9	0.0	19.5	5.6	0.0	30.5	3.5	20.4	20.6	5.6	16.4	5.2
Prop In Lane	1.00		0.12	1.00		0.17	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	378	0	987	533	0	1033	182	316	317	172	698	312
V/C Ratio(X)	0.14	0.00	0.43	0.30	0.00	0.60	0.30	0.86	0.86	0.52	0.66	0.23
Avail Cap(c_a), veh/h	540	0	987	640	0	1033	352	386	388	309	773	345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	19.1	14.1	0.0	19.4	44.8	55.0	55.1	44.6	51.1	46.6
Incr Delay (d2), s/veh	0.1	0.0	1.4	0.1	0.0	2.5	0.3	14.7	15.5	0.9	1.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	8.7	2.3	0.0	13.4	1.6	10.4	10.6	2.5	7.5	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.3	0.0	20.5	14.2	0.0	21.9	45.2	69.7	70.6	45.5	52.9	47.0
LnGrp LOS	B	A	C	B	A	C	D	E	E	D	D	D
Approach Vol, veh/h		483			778			600			618	
Approach Delay, s/veh		20.1			20.3			67.9			51.2	
Approach LOS		C			C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	84.6	13.4	30.6	13.6	80.4	10.8	33.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	16.0	50.0	18.0	30.0	16.0	50.0	18.0	30.0				
Max Q Clear Time (g_c+I1), s	3.9	32.5	7.6	22.6	7.6	21.5	5.5	18.4				
Green Ext Time (p_c), s	0.0	4.0	0.0	2.0	0.1	2.9	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay			39.5									
HCM 6th LOS			D									

Lanes, Volumes, Timings

23: Johnson St & Hospital Emergency Entrance



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	66	783	744	65	67	119
Future Volume (vph)	66	783	744	65	67	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			220	52	66
Storage Lanes	0			1	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1863	1583	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		306	685		513	
Travel Time (s)		7.0	15.6		11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	851	809	71	73	129
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	851	809	71	73	129
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.5%			ICU Level of Service B		
Analysis Period (min)	15					

HCM 6th TWSC
23: Johnson St & Hospital Emergency Entrance

Intersection						
Int Delay, s/veh	7.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	66	783	744	65	67	119
Future Vol, veh/h	66	783	744	65	67	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	851	809	71	73	129
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	880	0	-	0	1804	809
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	995	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	768	-	-	-	87	380
Stage 1	-	-	-	-	438	-
Stage 2	-	-	-	-	358	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	768	-	-	-	79	380
Mov Cap-2 Maneuver	-	-	-	-	79	-
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	358	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.8	0		74.2		
HCM LOS				F		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	768	-	-	-	79	380
HCM Lane V/C Ratio	0.093	-	-	-	0.922	0.34
HCM Control Delay (s)	10.2	-	-	-	171.6	19.3
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	-	-	4.9	1.5

Lanes, Volumes, Timings

21: Johnson St & Employee Parking Garage

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	524	5	9	769	10	2	0	62	260	0	260
Future Volume (vph)	40	524	5	9	769	10	2	0	62	260	0	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270		0	0		120	0		0	130		120
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.998			0.869				0.850
Flt Protected	0.950			0.950				0.999		0.950		
Satd. Flow (prot)	1770	1861	0	1770	1859	0	0	1617	0	1770	0	1583
Flt Permitted	0.087			0.321				0.999		0.950		
Satd. Flow (perm)	162	1861	0	598	1859	0	0	1617	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1			142				283
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		665			306			73			508	
Travel Time (s)		15.1			7.0			1.7			11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	570	5	10	836	11	2	0	67	283	0	283
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	575	0	10	847	0	0	69	0	283	0	283
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1		1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100		20	100		20	100		20		20
Trailing Detector (ft)	0	0		0	0		0	0		0		0
Detector 1 Position(ft)	0	0		0	0		0	0		0		0
Detector 1 Size(ft)	20	6		20	6		20	6		20		20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Prot		Perm
Protected Phases	1	6		5	2			4		3		
Permitted Phases	6			2			4					6

Lanes, Volumes, Timings

21: Johnson St & Employee Parking Garage

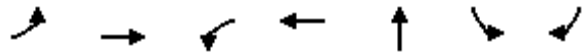
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		4	4		3		6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	24.0		11.0	24.0		24.0	24.0		24.0		24.0
Total Split (s)	11.0	56.0		11.0	56.0		24.0	24.0		24.0		56.0
Total Split (%)	9.6%	48.7%		9.6%	48.7%		20.9%	20.9%		20.9%		48.7%
Maximum Green (s)	5.0	50.0		5.0	50.0		18.0	18.0		18.0		50.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0		0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0		6.0		6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead		Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	Min		None	Min		Min	Min		Min		Min
Walk Time (s)		7.0			7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0		11.0
Pedestrian Calls (#/hr)		0			0		0	0		0		0
Act Effct Green (s)	55.3	54.4		53.0	50.2			5.5		18.1		54.4
Actuated g/C Ratio	0.56	0.55		0.54	0.51			0.06		0.18		0.55
v/c Ratio	0.25	0.56		0.03	0.89			0.31		0.87		0.28
Control Delay	12.4	17.3		8.8	36.1			3.5		67.0		2.4
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0		0.0
Total Delay	12.4	17.3		8.8	36.1			3.5		67.0		2.4
LOS	B	B		A	D			A		E		A
Approach Delay		17.0			35.8			3.5			34.7	
Approach LOS		B			D			A			C	
Intersection Summary												
Area Type: Other												
Cycle Length: 115												
Actuated Cycle Length: 98.1												
Natural Cycle: 115												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 0.89												
Intersection Signal Delay: 29.0 Intersection LOS: C												
Intersection Capacity Utilization 76.3% ICU Level of Service D												
Analysis Period (min) 15												

Splits and Phases: 21: Johnson St & Employee Parking Garage

								
Ø1	Ø2	Ø3	Ø4	Ø5	Ø6			
11 s	56 s	24 s	24 s	11 s	56 s			

Queues

21: Johnson St & Employee Parking Garage



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBR
Lane Group Flow (vph)	43	575	10	847	69	283	283
v/c Ratio	0.25	0.56	0.03	0.89	0.31	0.87	0.28
Control Delay	12.4	17.3	8.8	36.1	3.5	67.0	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	17.3	8.8	36.1	3.5	67.0	2.4
Queue Length 50th (ft)	11	205	3	502	0	184	0
Queue Length 95th (ft)	25	387	9	#775	0	#338	42
Internal Link Dist (ft)		585		226	1		
Turn Bay Length (ft)	270					130	120
Base Capacity (vph)	173	1031	383	951	413	325	1003
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.56	0.03	0.89	0.17	0.87	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 21: Johnson St & Employee Parking Garage

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	524	5	9	769	10	2	0	62	260	0	260
Future Volume (veh/h)	40	524	5	9	769	10	2	0	62	260	0	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	43	570	5	10	836	11	2	0	67	283	0	283
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	0	2
Cap, veh/h	175	940	8	339	892	12	39	0	0	316	0	0
Arrive On Green	0.04	0.51	0.51	0.01	0.48	0.48	0.05	0.00	0.05	0.18	0.00	0.00
Sat Flow, veh/h	1781	1851	16	1781	1842	24	0	0	0	1781	283	
Grp Volume(v), veh/h	43	0	575	10	0	847	69	0	0	283	63.0	
Grp Sat Flow(s),veh/h/ln	1781	0	1867	1781	0	1866	0	0	0	1781	E	
Q Serve(g_s), s	1.1	0.0	21.0	0.3	0.0	41.1	0.0	0.0	0.0	14.9		
Cycle Q Clear(g_c), s	1.1	0.0	21.0	0.3	0.0	41.1	0.1	0.0	0.0	14.9		
Prop In Lane	1.00		0.01	1.00		0.01	0.03		0.97	1.00		
Lane Grp Cap(c), veh/h	175	0	949	339	0	904	39	0	0	316		
V/C Ratio(X)	0.25	0.00	0.61	0.03	0.00	0.94	1.79	0.00	0.00	0.90		
Avail Cap(c_a), veh/h	205	0	974	410	0	973	251	0	0	334		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	20.7	0.0	16.8	14.1	0.0	23.3	43.2	0.0	0.0	38.6		
Incr Delay (d2), s/veh	0.7	0.0	1.0	0.0	0.0	15.3	375.0	0.0	0.0	24.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.5	0.0	8.8	0.1	0.0	20.7	4.9	0.0	0.0	8.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.5	0.0	17.8	14.1	0.0	38.6	418.2	0.0	0.0	63.0		
LnGrp LOS	C	A	B	B	A	D	F	A	A	E		
Approach Vol, veh/h	618			857			69					
Approach Delay, s/veh	18.1			38.3			418.2					
Approach LOS	B			D			F					
Timer - Assigned Phs	1	2	3	4	5	6						
Phs Duration (G+Y+Rc), s	9.4	52.4	23.0	11.0	7.2	54.7						
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0						
Max Green Setting (Gmax), s	5.0	50.0	18.0	18.0	5.0	50.0						
Max Q Clear Time (g_c+I1), s	3.1	43.1	16.9	2.1	2.3	23.0						
Green Ext Time (p_c), s	0.0	3.4	0.1	0.3	0.0	4.1						
Intersection Summary												
HCM 6th Ctrl Delay	49.6											
HCM 6th LOS	D											

Lanes, Volumes, Timings
3151: N 35th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	434	397	162	511	148	84	74	116	374	192	121
Future Volume (vph)	43	434	397	162	511	148	84	74	116	374	192	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.928				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1729	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.382			0.066			0.627			0.437		
Satd. Flow (perm)	712	1729	0	123	1863	1583	1168	3539	1583	814	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		42				161			153			132
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	472	432	176	555	161	91	80	126	407	209	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	904	0	176	555	161	91	80	126	407	209	132
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8

Lanes, Volumes, Timings
3151: N 35th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	31.0		11.0	31.0	31.0	11.0	31.0	31.0	11.0	33.0	33.0
Total Split (s)	11.0	78.0		17.0	84.0	84.0	12.0	31.0	31.0	24.0	43.0	43.0
Total Split (%)	7.3%	52.0%		11.3%	56.0%	56.0%	8.0%	20.7%	20.7%	16.0%	28.7%	28.7%
Maximum Green (s)	5.0	72.0		11.0	78.0	78.0	6.0	25.0	25.0	18.0	37.0	37.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0			18.0	18.0		18.0	18.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effect Green (s)	77.1	72.1		89.1	80.3	80.3	15.9	9.9	9.9	33.9	21.9	21.9
Actuated g/C Ratio	0.57	0.53		0.66	0.59	0.59	0.12	0.07	0.07	0.25	0.16	0.16
v/c Ratio	0.11	0.96		0.82	0.50	0.16	0.55	0.31	0.49	1.23	0.69	0.36
Control Delay	9.9	50.4		55.2	18.8	2.4	56.7	61.9	11.0	166.9	65.9	10.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	50.4		55.2	18.8	2.4	56.7	61.9	11.0	166.9	65.9	10.3
LOS	A	D		E	B	A	E	E	B	F	E	B
Approach Delay		48.4			23.1			38.7			111.0	
Approach LOS		D			C			D			F	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 135

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.23

Intersection Signal Delay: 55.8

Intersection LOS: E

Intersection Capacity Utilization 101.8%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 3151: N 35th Ave & Johnson St



Queues

3151: N 35th Ave & Johnson St

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	904	176	555	161	91	80	126	407	209	132
v/c Ratio	0.11	0.96	0.82	0.50	0.16	0.55	0.31	0.49	1.23	0.69	0.36
Control Delay	9.9	50.4	55.2	18.8	2.4	56.7	61.9	11.0	166.9	65.9	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	50.4	55.2	18.8	2.4	56.7	61.9	11.0	166.9	65.9	10.3
Queue Length 50th (ft)	13	692	84	272	0	63	35	0	~358	175	0
Queue Length 95th (ft)	32	#1108	#230	424	33	110	63	37	#649	262	56
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	445	942	215	1108	1007	164	655	417	331	510	530
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.96	0.82	0.50	0.16	0.55	0.12	0.30	1.23	0.41	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 3151: N 35th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	434	397	162	511	148	84	74	116	374	192	121
Future Volume (veh/h)	43	434	397	162	511	148	84	74	116	374	192	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	472	432	176	555	161	91	80	126	407	209	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	386	468	428	194	1076	912	213	345	154	373	344	291
Arrive On Green	0.02	0.52	0.52	0.08	0.58	0.58	0.04	0.10	0.10	0.13	0.18	0.18
Sat Flow, veh/h	1781	899	823	1781	1870	1585	1781	3554	1585	1781	1870	1585
Grp Volume(v), veh/h	47	0	904	176	555	161	91	80	126	407	209	132
Grp Sat Flow(s),veh/h/ln	1781	0	1722	1781	1870	1585	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	1.7	0.0	72.0	9.5	24.8	6.6	6.0	2.9	10.8	18.0	14.2	10.3
Cycle Q Clear(g_c), s	1.7	0.0	72.0	9.5	24.8	6.6	6.0	2.9	10.8	18.0	14.2	10.3
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	386	0	896	194	1076	912	213	345	154	373	344	291
V/C Ratio(X)	0.12	0.00	1.01	0.91	0.52	0.18	0.43	0.23	0.82	1.09	0.61	0.45
Avail Cap(c_a), veh/h	408	0	896	194	1076	912	213	642	286	373	500	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	33.2	45.8	17.7	13.9	54.1	57.7	61.3	52.8	51.9	50.3
Incr Delay (d2), s/veh	0.1	0.0	32.4	40.3	1.8	0.4	1.3	0.3	10.2	73.0	1.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	37.1	5.3	11.1	2.5	3.0	1.3	4.8	11.9	6.9	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	0.0	65.6	86.1	19.5	14.3	55.4	58.1	71.5	125.8	53.7	51.4
LnGrp LOS	B	A	F	F	B	B	E	E	E	F	D	D
Approach Vol, veh/h		951			892			297			748	
Approach Delay, s/veh		63.1			31.7			62.9			92.5	
Approach LOS		E			C			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	85.7	24.0	19.4	17.0	78.0	12.0	31.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	5.0	78.0	18.0	25.0	11.0	72.0	6.0	37.0				
Max Q Clear Time (g_c+I1), s	3.7	26.8	20.0	12.8	11.5	74.0	8.0	16.2				
Green Ext Time (p_c), s	0.0	4.9	0.0	0.6	0.0	0.0	0.0	1.6				
Intersection Summary												
HCM 6th Ctrl Delay			61.0									
HCM 6th LOS			E									

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	347	48	127	403	82	51	432	69	82	421	65
Future Volume (vph)	50	347	48	127	403	82	51	432	69	82	421	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		0	300		0	250		250	130		130
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.982			0.975			0.979				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1829	0	1770	1816	0	1770	3465	0	1770	3539	1583
Flt Permitted	0.348			0.373			0.350			0.198		
Satd. Flow (perm)	648	1829	0	695	1816	0	652	3465	0	369	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			8			12				119
Link Speed (mph)		30			30			30				30
Link Distance (ft)		665			725			700				455
Travel Time (s)		15.1			16.5			15.9				10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	377	52	138	438	89	55	470	75	89	458	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	429	0	138	527	0	55	545	0	89	458	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		8

Lanes, Volumes, Timings
3152: N 46th Ave & Johnson St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	12.0		4.0	12.0		4.0	6.0		4.0	6.0	6.0
Minimum Split (s)	11.0	37.0		11.0	37.0		11.0	27.0		11.0	27.0	27.0
Total Split (s)	22.0	56.0		22.0	56.0		24.0	36.0		24.0	36.0	36.0
Total Split (%)	15.9%	40.6%		15.9%	40.6%		17.4%	26.1%		17.4%	26.1%	26.1%
Maximum Green (s)	16.0	50.0		16.0	50.0		18.0	30.0		18.0	30.0	30.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		24.0			24.0			14.0			14.0	14.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effect Green (s)	75.2	69.5		82.2	74.5		34.1	27.2		38.4	30.9	30.9
Actuated g/C Ratio	0.54	0.50		0.60	0.54		0.25	0.20		0.28	0.22	0.22
v/c Ratio	0.14	0.46		0.29	0.54		0.25	0.79		0.47	0.58	0.16
Control Delay	13.8	26.0		14.3	25.2		35.3	59.9		41.7	50.8	1.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	13.8	26.0		14.3	25.2		35.3	59.9		41.7	50.8	1.5
LOS	B	C		B	C		D	E		D	D	A
Approach Delay		24.7			23.0			57.7			43.8	
Approach LOS		C			C			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 37.6

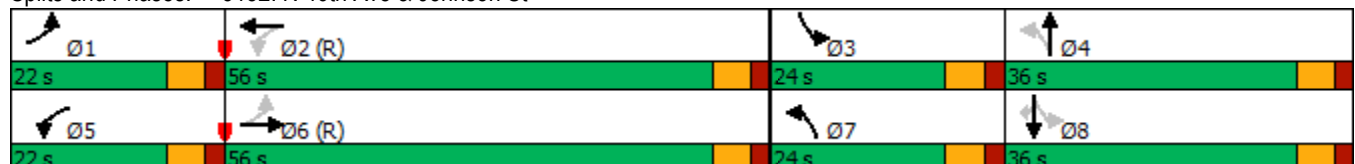
Intersection LOS: D

Intersection Capacity Utilization 68.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3152: N 46th Ave & Johnson St



Queues

3152: N 46th Ave & Johnson St

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	429	138	527	55	545	89	458	71
v/c Ratio	0.14	0.46	0.29	0.54	0.25	0.79	0.47	0.58	0.16
Control Delay	13.8	26.0	14.3	25.2	35.3	59.9	41.7	50.8	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.8	26.0	14.3	25.2	35.3	59.9	41.7	50.8	1.5
Queue Length 50th (ft)	18	239	50	301	36	242	59	198	0
Queue Length 95th (ft)	44	404	97	493	62	291	92	239	6
Internal Link Dist (ft)		585		645		620		375	
Turn Bay Length (ft)	220		300		250		130		130
Base Capacity (vph)	523	923	548	983	343	781	294	817	457
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.46	0.25	0.54	0.16	0.70	0.30	0.56	0.16
Intersection Summary									

HCM 6th Signalized Intersection Summary 3152: N 46th Ave & Johnson St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	347	48	127	403	82	51	432	69	82	421	65
Future Volume (veh/h)	50	347	48	127	403	82	51	432	69	82	421	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	377	52	138	438	89	55	470	75	89	458	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	442	878	121	529	859	175	182	547	87	172	698	312
Arrive On Green	0.03	0.55	0.55	0.05	0.57	0.57	0.03	0.18	0.18	0.05	0.20	0.20
Sat Flow, veh/h	1781	1609	222	1781	1509	307	1781	3072	488	1781	3554	1585
Grp Volume(v), veh/h	54	0	429	138	0	527	55	271	274	89	458	71
Grp Sat Flow(s),veh/h/ln	1781	0	1830	1781	0	1815	1781	1777	1783	1781	1777	1585
Q Serve(g_s), s	1.9	0.0	19.2	4.7	0.0	24.3	3.5	20.4	20.6	5.6	16.4	5.2
Cycle Q Clear(g_c), s	1.9	0.0	19.2	4.7	0.0	24.3	3.5	20.4	20.6	5.6	16.4	5.2
Prop In Lane	1.00		0.12	1.00		0.17	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	442	0	999	529	0	1033	182	316	317	172	698	312
V/C Ratio(X)	0.12	0.00	0.43	0.26	0.00	0.51	0.30	0.86	0.86	0.52	0.66	0.23
Avail Cap(c_a), veh/h	603	0	999	649	0	1033	352	386	388	309	773	345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	18.6	13.8	0.0	18.0	44.8	55.0	55.1	44.6	51.1	46.6
Incr Delay (d2), s/veh	0.0	0.0	1.3	0.1	0.0	1.8	0.3	14.7	15.5	0.9	1.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	8.5	1.9	0.0	10.6	1.6	10.4	10.6	2.5	7.5	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.8	0.0	19.9	13.9	0.0	19.8	45.2	69.7	70.6	45.5	52.9	47.0
LnGrp LOS	B	A	B	B	A	B	D	E	E	D	D	D
Approach Vol, veh/h	483			665			600			618		
Approach Delay, s/veh	19.4			18.6			67.9			51.2		
Approach LOS	B			B			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	84.6	13.4	30.6	12.7	81.3	10.8	33.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	16.0	50.0	18.0	30.0	16.0	50.0	18.0	30.0				
Max Q Clear Time (g_c+I1), s	3.9	26.3	7.6	22.6	6.7	21.2	5.5	18.4				
Green Ext Time (p_c), s	0.0	3.6	0.0	2.0	0.1	2.9	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay	39.8											
HCM 6th LOS	D											